

Curriculum Vitae

Alex Kigerl, Ph.D.

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EDUCATION

2014	Ph.D. Criminal Justice and Criminology	Washington State University
2010	M.S. Criminology and Criminal Justice	Portland State University
2008	B.S. Psychology and Sociology	Portland State University

PEER REVIEWED PUBLICATIONS

- Hamilton, Zachary, John Ursino, **Alex Kigerl** (2024). Advancing Pretrial Assessments: Development of the Personal Recognizance Interview & Needs Screen (PRINS). *Journal of Criminal Justice*. DOI: 10.1016/j.jcrimjus.2024.102183.
- Krushas, Amber, Zachary Hamilton, **Alex Kigerl**, & Xiaohan Mei (2024). Finding an Answer in Time: Assessing Change in Needs Scores on Time to Recidivism Among Justice-Involved Youth. *Journal of Criminal Justice*, DOI: 10.1016/j.jcrimjus.2023.102146.
- Hamilton, Zachary, Melissa Kowalski, Michael Campagna, Addison Kobie, & **Alex Kigerl** (2023). Comparing Meters to Yards: Gender-Neutrality & Overclassification. *Justice Quarterly*, DOI: 10.1080/07418825.2023.2286238.
- Mei, Xiaohan, Zachary Hamilton, **Alex Kigerl**, Amber Krushas, & Faye S. Taxman (2023). Best Practices for Neglected Assumptions: Multi-Site Confirmation of the MPACT-6. *Crime and Delinquency*, DOI: 10.1177/0011128723118.
- Hamilton, Zachary, Grant Duwe, & **Alex Kigerl**, Jason Gwinn, Neal Langan, & Christopher Dollar (2022). Tailoring to a Mandate: The Development and Validation of the Prisoner Assessment Tool Targeting Estimated Risk and Needs (PATTERN). *Justice Quarterly*, 39(6), 1129-1155, DOI: 10.1080/07418825.2021.1906930.
- Kigerl, Alex**, Zachary Hamilton, Melissa Kowalski, & Xiaohan Mei (2022). The Great Methods Bake-Off: Comparing Performance of Machine Learning Algorithms. *Journal of Criminal Justice*, DOI: 10.1016/j.jcrimjus.2022.101946.
- Mei, Xiaohan, Zachary Hamilton, Melissa Kowalski, Douglas Routh, & **Alex Kigerl** (2021). Redesigning the Central Eight. *Youth Violence and Juvenile Justice*, DOI: 10.1177/15412040211014264.
- Kigerl, Alex** (2021). Routine Activity Theory and Malware, Fraud, and Spam at the National Level. *Crime, Law and Social Change*, 76(2), 109-130, DOI: 10.1007/s10611-021-09957-y.

- Hamilton, Zachary, **Alex Kigerl**, & Melissa Kowalski (2021). Prediction is Local: The Benefits of Risk Assessment Optimization. *Justice Quarterly*, 39(4), 722-744, DOI: 10.1080/07418825.2021.1894215.
- Kigerl, Alex** (2020). Behind the Scenes of the Underworld: Hierarchical Clustering of two Leaked Carding Forum Databases. *Social Science Computer Review*, 40(3), 618-640, DOI: 10.1177/0894439320924735.
- Neuilly, Melanie-Angela, Ming-Li Hsieh, **Alex Kigerl**, & Zachary Hamilton (2020). Data Missingness Patterns in Homicide Datasets: An Applied Test on a Primary Data Set. *Violence and Victims*, 35(4), 589-614, DOI: 10.1891/VV-D-17-00189.
- Hamilton, Zachary, Melissa Kowalski, **Alex Kigerl**, & Douglas Routh (2019). Optimizing Youth Risk Assessment Performance: Development of the Modified Positive Achievement Change Tool (M-PACT) in Washington State. *Criminal Justice and Behavior*, 46(8), 1106-1127, DOI: 10.1177/0093854819857108.
- Kigerl, Alex** (2018). Email Spam Origins: Does the CAN SPAM Act Shift Spam Beyond United States Jurisdiction? *Trends in Organized Crime*, 21(1), 62-78, DOI: 10.1007/s12117-016-9289-9.
- Hamilton, Zachary, Melissa Kowalski, Roger Schafer, & **Alex Kigerl** (2019). Recrafting Juvenile Risk Assessment: Developing the Modified Positive Achievement Change Tool for Iowa. *Deviant Behavior*, 41(10), 1268-1289, DOI: 10.1080/01639625.2019.1609302.
- Kigerl, Alex** (2017). Profiling Cybercriminals: Topic Model Clustering of Carding Forum Member Comment Histories. *Social Science Computer Review*, 36(5), 591-609, DOI: 10.1177/0894439317730296.
- van Wormer, Jacqueline, **Alex Kigerl** & Zachary Hamilton (2017). Digging Deeper: Exploring the Value of Prison-Based Dog Handler Programs. *The Prison Journal*, 97(4), 520-538, DOI: 10.1177/0032885517712481.
- Kigerl, Alex** (2016). Cybercrime Nation Typologies: K-Means Clustering of Countries Based on Cybercrime Rates. *International Journal of Cyber Criminology*, 10(2), 147-169, DOI: 10.5281/zenodo.163399.
- Kigerl, Alex** (2016). Detering Spammers: Impact Assessment of the CAN SPAM Act on Email Spam Rates. *Criminal Justice Policy Review*, 27(8), 791-811, DOI: 10.1177/0887403414562604.
- Hamilton, Zachary, Christopher Campbell, Jacqueline van Wormer, **Alex Kigerl**, & Brianne Posey (2016). The Impact of Swift and Certain Sanctions: An Evaluation of Washington State's Policy for Offenders on Community Supervision. *Criminology and Public Policy*, 15(4), 1009-1072, DOI: 10.1111/1745-9133.12245.

- Kigerl, Alex & Zachary Hamilton** (2016). Triaging Psychiatric Care: Risk Assessment Construction and Validation for Washington's Involuntary Treatment and Forensic Commitment Populations. *International Journal of Offender Therapy and Comparative Criminology*, 61(15), 1682-1700, DOI: 10.1177/0306624X16628237.
- Kigerl, Alex & Zachary Hamilton** (2015). The Impact of Transfers between Prisons on Inmate Misconduct: Testing Importation, Deprivation, and Transfer Theory Models. *The Prison Journal*, 96(2), 232-257, DOI: 10.1177/0032885515618466.
- Hamilton, Zachary, **Alex Kigerl**, Michael Campagna, Robert Barnoski, Stephen Lee, Jacqueline van Wormer, & Lauren Block (2015). Designed to Fit: The Development and Validation of the STRONG-R Recidivism Risk Assessment. *Criminal Justice and Behavior*, 43(2), 230-263, DOI: 10.1177/0093854815615633.
- Kigerl, Alex** (2015). Evaluation of the CAN SPAM Act: Testing Deterrence and Other Influences of Email Spammer Legal Compliance Over Time. *Social Science Computer Review*, 33(4), 440-458, DOI: 10.1177/0894439314553913.
- Hamilton, Zachary, **Alex Kigerl**, & Zachary Hays (2015). Removing Release Impediments and Reducing Correctional Costs: Evaluation of Washington State's Housing Voucher Program. *Justice Quarterly*, 32(2), 255-287, DOI: 10.1080/07418825.2012.761720.
- Kigerl, Alex** (2013). Infringing Nations: Predicting Software Piracy Rates, BitTorrent Tracker Hosting, and P2P File Sharing Client Downloads Between Countries. *International Journal of Cyber Criminology*, 7(1), 62-80.
- Kigerl, Alex** (2012). Routine Activity Theory and the Determinants of High Cybercrime Countries. *Social Science Computer Review*, 30(4), 470-486, DOI: 10.1177/0894439311422689.
- Kigerl, Alex** (2009). CAN SPAM Act: An Empirical Analysis. *International Journal of Cyber Criminology*, 3(2), 566-589.
- Publications can be read on ResearchGate: https://www.researchgate.net/profile/Alex_Kigerl
Google Scholar Profile: <https://scholar.google.com/citations?user=0gKphwoAAAAJ>

TECHNICAL REPORTS

- Hamilton, Zachary, **Alex Kigerl**, Baylee Allen, Addison Kobie, John Ursino, Amber Krushas, Brian Gildea, & Ryan Spohn (2024). Nebraska Department of Correctional Services Classification & Crowding Project. *Nebraska Department of Correctional Services*. Lincoln, NE.
- Hamilton, Zachary, **Alex Kigerl**, Baylee Allen, Addison Kobie, John Ursino, Amber Krushas, Brian Gildea, & Ryan Spohn (2023). Nebraska Department of Correctional Services Classification & Flow Project. *Nebraska Department of Correctional Services*. Lincoln, NE.
- Hamilton, Zachary, **Alex Kigerl**, John Ursino, & Amber Krushas (2022). Personal Recognizance Interview & Needs Screen (PRINS) Evaluation and Revalidation. *Department of Adult and Juvenile Detention (DAJD)*. King County, WA.

- Hamilton, Zachary, **Alex Kigerl**, Jacqueline van Wormer, Breanna Hayden, & Richard Matheson (2021). Spokane Pathways HUB Program Evaluation. *Washington State Institute for Criminal Justice*. Spokane, WA.
- Hamilton, Zachary, **Alex Kigerl**., Melissa Kowalski, Douglas Routh, & Xiaohan Mei (2020). PACT Validation and Weighting Results Technical Report Deliverable 2: PACT Responsivity Assessment. *Washington Association of Juvenile Court Administrators*. Olympia, WA.
- Hamilton, Zachary & **Alex Kigerl** (2019). Washington State Department of Corrections Prison Classification Project Deliverable 1: Progress Report and Technical Report. *Washington State Institute for Criminal Justice*. Spokane, WA.
- van Wormer, Jacqueline, Zachary Hamilton, & **Alex Kigerl** (2019). Snohomish County Juvenile Drug Treatment Courts: Outcome Evaluation. *Washington State Institute for Criminal Justice*. Snohomish County, WA.
- Hamilton, Zachary, Mia Abboud Holbrook, & **Alex Kigerl** (2019). City of Spokane Municipal Community Court: Process and Outcome Evaluation. *Washington State Institute for Criminal Justice*. Spokane, WA.
- Hamilton, Zachary, **Alex Kigerl**, Xiaohan Mei, Douglas Routh, & Melissa Kowalski (2018). PACT Validation and Weighting Results: Updated PACT Risk and Needs Assessment. *Washington Association of Juvenile Court Administrators*. Olympia, WA.
- McCurley, Carl, & **Alex Kigerl**, Andrew Peterson (2017). Students Before and After Juvenile Court Dispositions: Student Characteristics, Education Progress, Juvenile Court Dispositions, and Education Outcomes in Washington State. *Center for Court Research, Administrative Office of the Courts*. Olympia, WA.
- Hamilton, Zachary & **Alex Kigerl** (2016). Research in Brief – TDOC STRONG-R Development. *Tennessee Department of Corrections*. Nashville, TN.
- Hamilton, Zachary & **Alex Kigerl**. (2016). Iowa Delinquency Assessment (IDA) Validation, Assessment, & Recommendations. *Washington State Institute for Criminal Justice*. Spokane, WA.
- Hamilton, Zachary, & **Alex Kigerl** (2016). Development and Validation of the Nebraska Department of Correctional Services Prison Classification System. *Nebraska Department of Correctional Services*. Lincoln, NE.
- Hamilton, Zachary, Jacqueline van Wormer, **Alex Kigerl**, Christopher Campbell & Brianne Posey (2015). Evaluation of Washington State Department of Corrections (WADOC) Process, Outcome and Cost-Benefit Evaluation Swift and Certain (SAC) Policy. *Washington Department of Corrections*. Olympia, WA.

Kigerl, Alex & Zachary Hamilton (2015). Risk Assessment Validation for Washington's Involuntary Treatment and Forensic Commitment Populations – Phase 1 Technical Report. *Washington State Institute for Public Policy*. Olympia, WA.

Hamilton, Zachary, Jacqueline van Wormer, **Alex Kigerl**, Michael Campagna, Robert Barnoski, Lauren Block & Stephen Lee (2014). The STRONG-R Recidivism Risk Assessment. *Washington State Department of Corrections*. Olympia, WA.

van Wormer, Jacqueline & **Alex Kigerl** (2014). Washington State Department of Corrections Dog Handlers Outcome Report. *Washington Department of Corrections*. Olympia, WA.

Hamilton, Zachary, **Alex Kigerl** & Christopher Campbell (2014). The Gender Responsive Initiative's Women's Risk and Needs Assessment Instrument Pilot. *Washington State Department of Corrections*. Olympia, WA.

GRANTS AND CONTRACTS

Hamilton, Zachary, **Alex Kigerl** (January, 2020). South King County Pretrial Services Outcomes Evaluation. King County, WA. Amount requested: \$49,910; Accepted.

Hamilton, Zachary, **Alex Kigerl** (2019). California Department of Corrections and Rehabilitation Inmate Classification System. Amount requested: \$698,934; Pending.

Hamilton, Zachary, **Alex Kigerl**, Dale Willits (April, 2019). A Practical Exploration of the Mechanisms, Group Differences, and Intervention Effects of Desistance. *Department of Justice*. Amount requested: \$526,984; Not funded.

Hamilton, Zachary, **Alex Kigerl** (March, 2019). BJA's Smart Reentry: Focus on Evidence-based Strategies for Successful Reentry from Incarceration to Community. Spokane, WA. Amount requested: \$72,016; Accepted.

Hamilton, Zachary, **Alex Kigerl** (June, 2019). Pioneer Human Services' Community-based Adult Reentry Project. *Department of Justice*. Amount requested: \$96,040; Not funded.

Alex Kigerl (May, 2019). Exploring the Data Horizon: Evaluating the Need for More Frequent Offender Risk Rescoring and Reweighting. *National Institute of Justice*, Artificial Intelligence Research and Development to Support Community Supervision. Amount requested: \$921,548; Not funded.

Hamilton, Zachary, **Alex Kigerl** (February, 2017). Optimizing Juvenile Assessment Performance. *Department of Justice*. Amount requested: \$124,803; Accepted.

Hamilton, Zachary, **Alex Kigerl** (February, 2016). Education and Juvenile Justice Outcomes. *Office of Financial Management*. Olympia, WA. Amount requested: \$90,000; Accepted.

Hamilton, Zachary, **Alex Kigerl**, Jacqueline van Wormer (January, 2016). Washington State Offender Risk Assessment Project. *Washington State Department of Corrections*. Tumwater, WA. \$185,000; Accepted.

Kigerl, Alex (July, 2015). Fraud and Malware through Spam: Evaluating Federal Cybercrime Laws. *National Science Foundation, Law and the Social Sciences Section*, Solicitation 15-514. Amount requested: \$108,845; Not funded.

Hamilton, Zachary & **Alex Kigerl** (October, 2013). Involuntary Treatment Act Risk Assessment. *Washington State Institute of Public Policy*. Olympia, WA. Amount requested: \$80,000; Accepted.

Hamilton, Zachary, & **Alex Kigerl** (October, 2013). Women's Risk-Need Assessment. *Washington State Department of Corrections*. Tumwater, WA. Amount requested: \$68,000; Accepted.

EDITED VOLUMES

Kigerl, Alex (2019). Spam-Based Scams. In Holt, T., & Bossler, A. (Ed.). *The Palgrave Handbook of International Cybercrime and Cyberdeviance*. Palgrave Macmillan, Cham.

Kigerl, Alex (2017). Malicious Spam: The Impact of Prosecuting Spammers on Fraud and Malware Contained in Email Spam. Chapter 3 in Saadawi, T. & Colwell, J. D (Ed.). *Cyber Infrastructure Protection*, Volume 3. Strategic Studies Institute and U.S. Army War College Press.

Kigerl, Alex (2013). Cybercrime: High Tech Crime in the Information Age. Chapter 9 in Helfgott, J. B. (Ed.). *Criminal Psychology*, Volume 2. Westport, CT: Praeger Publishers.

Lutze, Faith & **Alex Kigerl** (2013). The Psychology of Prisoner Reentry. Chapter 13 in Helfgott, J. B. (Ed.). *Criminal Psychology*, Volume 4. Westport, CT: Praeger Publishers.

INVITED PRESENTATIONS

Kigerl, Alex (2015). Malicious Spam: The Impact of Prosecuting Spammers on Fraud and Malware Contained in Email Spam. *Cyber Infrastructure Protection Conference*. City University of New York. New York, NY.

CONFERENCE PRESENTATIONS

Hamilton, Zachary, Jennifer Tostlebe, John Ursino, Baylee Allen, & **Alex Kigerl** (2024). Measuring Desistance via Decay: Making Criminal History Dynamic. *American Society of Criminology*. Salt Lake City, UT.

Hamilton, Zachary, Mia Abboud, **Alex Kigerl**, & Jacqueline van Wormer (2017). The SAFER Pretrial Assessment Tool. *American Society of Criminology*. Philadelphia, PA.

Van Wormer, Jacqueline, Zachary Hamilton, **Alex Kigerl**, Christopher Campbell, & Brianne Posey (2015). Evaluation of Washington State's Swift and Certain Policy for Community Supervision of Offenders. *American Society of Criminology*. Washington, DC.

- Kigerl, Alex** (2014). Evaluation of the CAN SPAM Act: Testing Deterrence and Other Influences of Email Spammer Behavior Over Time. *American Society of Criminology*. San Francisco, CA.
- Hamilton, Zachary, Michael Campagna, **Alex Kigerl** & Elizabeth Tollefsbol (2014). The STRONG-N Stand-Alone Needs Assessment. *American Society of Criminology*. San Francisco, CA.
- Hamilton, Zachary, **Alex Kigerl**, Michael Campagna, Robert Barnoski, Lauren Block & Stephen Lee (2014). The Washington State Risk-Needs System: STRONG-R. *Academy of Criminal Justice Sciences*. Philadelphia, PA.
- Hamilton, Zachary & **Alex Kigerl** (2014). The Washington State Risk-Needs System for Prison Infractions: STRONG-R-PI. *Academy of Criminal Justice Sciences*. Philadelphia, PA.
- Hamilton, Zachary, Ming-Li Hsieh, **Alex Kigerl** & Andrea Walker (2014). The Washington State Risk-Needs System for Sex Offenders: STRONG-R-SO. *Academy of Criminal Justice Sciences*. Philadelphia, PA.
- Kigerl, Alex** & Zachary Hamilton (2013). The Impact of Transfers between Prisons on Inmate Misconduct: Testing Importation, Deprivation, and Transportation Models. *American Society of Criminology*. Atlanta, GA.
- Kigerl, Alex** (2013). Infringing Nations: Predicting Software Piracy Rates, BitTorrent Tracker Hosting, and P2P File Sharing Client Downloads Between Countries. *Wiley Research Exposition*. Pullman, WA.
- Hamilton, Zachary, **Alex Kigerl** & Zachary Hays (2012). Evaluation of Washington State's Earned Release Date Housing Voucher Program. *American Society of Criminology*. Chicago, IL.
- Schaefer, Roger, **Alex Kigerl** & Amber Morczek (2012). Examining the Relationship Between Victim-Offender Relationship and Recidivism Type Among Child-Based Sex Offenders. *American Society of Criminology*. Chicago, IL.

SKILLS

Statistical Packages and Programming: R, SPSS with Python, SAS, Gurobi, Stata

- Statistical methods: Time series, panel data models, count models, cost-benefit analysis, event-history analysis, multi-level modeling, item response theory, path models, trajectory modeling, quasi-experimental designs (weighting and matching), imputation, and optimization
- Supervised machine learning: Penalized & boosted regression, neural networks, K-nearest neighbors, support vector machines, naïve Bayes, and random forests
- Unsupervised machine learning: Hierarchical agglomerative clustering, k-means clustering, latent Dirichlet allocation, topic modeling, and latent class analysis

Databases: SQL, TSQL, SQL Server, MySQL, SQLite, MongoDB, Access

Computer Programming and Web Development

- Knowledge of multiple programming and markup languages for web, desktop, and mobile based applications
- Datasets: Experience building datasets with third generation programming languages such as PERL, Python, VBA, Java, and R
- Surveys: Programmed both desktop and online surveys to collect self-report data in C++, C#, and PHP

Distributed Computing Systems: AWS, Python/Fabric, SLURM, MapReduce, Hadoop, HDFS

Visualization: Tableau, Sisense, R/ggplot2

Microsoft Office Suite: VBA programming skills for writing macros in Access, Excel, Word, and Outlook

EXPERIENCE

- 2020.10 – Present **Research Associate**, University of Nebraska Omaha, Omaha, NE
- Develop risk assessments which are used across the US at the county, state, and federal level
 - As part of a federal grant, constructed a dataset of risk assessments administered to juvenile offenders across 10 different states in the US, totaling over 250,000 individual youth, to further improve on risk forecasting methods
 - Developed custom probabilistic matching software in R to synthesize multiple data sources lacking common identifiers to facilitate dozens of research projects
- 2018.08 – Present **Data Scientist**, Vant4ge, Salt Lake City, UT
- Curate and preprocess client database exports to build final datasets for analysis
 - Develop and deploy patented machine learning algorithms to build risk assessment products
 - Provide diagnostic support to address questions about existing data sources
- 2014.08 – 2020.08 **Assistant Research Professor**, Washington State University, Spokane, WA
Data Scientist, Washington State Institute for Criminal Justice Research
- Deployed statistical models on WSU's Kamiak high performance computing cluster using SLURM
 - Provide cost-benefit analyses evaluating government policies, saving millions in tax dollars
 - Designed a bootstrapping feature selection algorithm, for the STRONG-R risk assessment

- 2019.01 – 2019.12 **Research Consultant**, National Institute of Justice
- Hired to implement the requirements of the First Step Act to build a risk and needs assessment for the Bureau of Prisons (BOP)
 - Built the analytic datasets from the BOP administrative database
 - Wrote and deployed custom machine learning tool to develop the PATTERN, a new risk assessment to be administered to all federal prisoners
- 2012.01 – 2014.07 **Research Assistant**, Washington State University, Pullman, WA
- Managed the data warehouse for the Washington State Department of Corrections database provided to the Criminal Justice and Criminology department at WSU
 - Built datasets from among the 400+ tables of the database upon faculty request for research purposes using Python, SPSS, and SAS as needed
 - Conducted statistical analysis for select projects in R

SERVICE

Ad Hoc Reviewer	<i>Justice Quarterly</i>	2024
Ad Hoc Reviewer	<i>Criminal Justice Policy Review</i>	2024
Ad Hoc Reviewer	<i>Discover Data</i>	2023
Ad Hoc Reviewer	<i>The Journal of Black Psychology</i>	2023
Masters Committee	<i>Kim Satterfield – Outside Reader (Seattle University)</i>	2022
Ad Hoc Reviewer	<i>Justice Quarterly</i>	2022
Ad Hoc Reviewer	<i>Journal of Cyber Policy</i>	2022
Ad Hoc Reviewer	<i>Social Network Analysis and Mining</i>	2021
Ad Hoc Reviewer	<i>Social Science Computer Review</i>	2021
Ad Hoc Reviewer	<i>Social Science Computer Review</i>	2020
Ad Hoc Reviewer	<i>Journal of Experimental and Theoretical Artificial Intelligence</i>	2019
Ad Hoc Reviewer	<i>Computers in Human Behavior</i>	2018
Ad Hoc Reviewer	<i>Criminology and Public Policy</i>	2017
Ad Hoc Reviewer	<i>Sociological Spectrum</i>	2016
Ad Hoc Reviewer	<i>Justice Quarterly</i>	2016
Ad Hoc Reviewer	<i>International Journal of Cyber Criminology</i>	2016
Ad Hoc Reviewer	<i>American Journal of Criminal Justice</i>	2015
Ad Hoc Reviewer	<i>Journal of Criminal Justice</i>	2014
Ad Hoc Reviewer	<i>International Journal of Cyber Criminology</i>	2014
Ad Hoc Reviewer	<i>International Journal of Sociology and Anthropology</i>	2013
Ad Hoc Reviewer	<i>Annals of Telecommunications</i>	2013
Ad Hoc Reviewer	<i>Criminal Justice Policy Review</i>	2013
Ad Hoc Reviewer	<i>Information</i>	2012
Ad Hoc Reviewer	<i>Social Science Computer Review</i>	2012
Ad Hoc Reviewer	<i>International Journal of Cyber Criminology</i>	2011

AWARDS

2014 Outstanding Doctoral Student, Washington State University, Department of Criminal Justice and Criminology