Graham Enos

Summary

More than 10 years of mathematical research, computer programming, and education experience; Extensive experience in data science, modeling, analysis and visualization; Previously held Top Secret/SCI clearance; passed special background investigation, full scope polygraph.

Areas of Expertise

- Data Science, Statistical Data Mining and Modeling, Software Development
- Programming in Python (especially the pydata stack), Scala, R, SQL, C, C++, Haskell, Rust
- Elliptic Curve Public Key Cryptography, Computational and Algorithmic Abstract Algebra and Group Theory

Relevant Experience

2020–present *Senior Researcher, Quantum Machine Learning*, Rigetti Computing, Washington, DC

- Researching quantum computing for machine learning

2016–2020 *Senior Data Scientist*, Quantifind, Inc., Washington, DC

- Conducted literature review and original research to answer open-ended questions prompted by product and stakeholder requests
- Prototyped novel machine learning algorithms and models in Python and R
- Developed and integrated models and algorithms into a monolithic multi-developer Scala code base, conducted unit and integration testing, issued and responded to code reviews, followed other software engineering best practices, deployed at scale
- Incorporated new data sources into our product stack, set up and administered PostgreSQL databases

2012–2016 *Applied Research Mathematician*, Department of Defense, Fort Meade, MD

- Received cash award in 2013 for saving an immense amount of time, effort, and money by advocating for continuous integration and developing an internal tool that drastically shortened development feedback loop for a large scale, multi-developer, mission-critical high performance computing project
- Examined, extracted, cleaned, explored, visualized, and modeled data from multiple, disparate sources of varying consistency and quality using a variety of statistical techniques and analytical tools
- Selected to be a Teaching Assistant for internal Statical Data Analysis and Data Mining course and was the only TA explicitly praised in student evaluation forms
- Trained in data mining, machine learning, cryptanalysis, computer security, information assurance, computer network exploitation, software reverse engineering
- Authored internal technical/mathematical papers and software tools to advance the state of the art in language-independent text summarization, anomalous object detection in large data sets, and public key cryptography

Education

2009–2013 Ph.D. in Applied Mathematics, *University of North Carolina at Charlotte*, Charlotte, NC
Wrote and defended dissertation "Binary Edwards Curves and Elliptic Curve Cryptography" while working full time as an Applied Research Mathematician at the U.S. Department of Defense; Dr. Yuliang Zheng & Dr. Gabor Hetyei, advisors

2007 B.A. in Mathematics & Philosophy, *Bates College*, Lewiston, ME
3.93 GPA; graduated Summa Cum Laude, Phi Beta Kappa, & Sigma Xi

Publications

- Graham Enos. *Complete and unified group laws are not enough for elliptic curve cryptography*. Cryptology ePrint Archive, Report 2013/015, 2013.
- Graham Enos and Yuliang Zheng. *An id-based signcryption scheme with compartmented secret sharing for unsigncryption*. Information Processing Letters, 115(2):128 – 133, 2015.