Athan Reines

Experience

Vurb (acquired by Snapchat), San Francisco, California | www.vurb.com

Data Engineer **June 2015 – December 2015**

- Built ETL applications for real-time monitoring of server infrastructure.
- Built Node.js microservices for user analytics ingestion and persistence.
- Built an ETL pipeline for migrating data from PostgreSQL into InfluxDB and Redshift.

NodePrime (acquired by Ericsson), San Francisco, California

Data Scientist/Engineer **September 2013 – February 2015**

- Researched and implemented similarity measures for machine inventories to provide insight into datacenter topology.
- Implemented visual methods to infer machine heterogeneity and anomalies.
- Built Node.js microservices for machine data analytics and visualization.

DECODED*, London, United Kingdom | www.decoded.com

Data Scientist **August 2012 – August 2013**

- Designed and developed the Data Visualization in a Day product.
- Led 1-day intensive workshops to help clients leverage data APIs and web-based frameworks to create interactive data visualizations for business intelligence and insight.

Projects

stdlib | www.stdlib.rocks

Project Lead **December 2015 – present**

- Lead development of an **open source** standard library for JavaScript and Node.js, with an emphasis on numerical and scientific computing applications.
- Wrote low-level bindings for BLAS and LAPACK.
- Implemented standard math library functions and PRNGs.
- Implemented a high-performance ndarray API for multi-dimensional data.
- Wrote tools for automation (continuous integration, testing, benchmarking, static analysis, and document processing and transformation).

Education

University of Oxford, Oxford, United Kingdom

Doctor of Philosophy (Condensed Matter Physics) **October 2008 – December 2012**

- Thesis: *Analysis methods for single-molecule fluorescence spectroscopy*
- Trained hidden Markov models (HMMs) on single-molecule fluorescence time series to uncover hidden state trajectories and reaction kinetics.
- Implemented multi-pass algorithms for change-point detection using sliding window t-tests.
- Developed visual techniques for analyzing biological time series data.
- Wrote Markov chain Monte Carlo simulations to model biological reactions.

Washington University, St. Louis, Missouri, United States

Post-Baccalaureate Certificate in Premedical Studies **September 2007 – May 2008**

- GPA: 3.70 (4.0 scale)

Saint Peter's University, Jersey City, New Jersey, United States

Bachelor of Science **September 2003 – May 2007**

- Majors: Physics, Mathematics, Philosophy
- Minor: Biology
- GPA: 3.98 (4.0 scale)
- Valedictorian, Class of 2007; Honors Summa Cum Laude

Skills

- JavaScript, Node.js, WebAssembly
- Bash, GNU Make, AWK, Git
- Fortran, C
- MATLAB/Octave, R, Python, Julia

Links

- GitHub: github.com/kgryte
- Talk: Math in V8 is Broken (https://youtu.be/03WhsgTpp7g)
- Talk: WebAssembly and the Future of the Web (https://youtu.be/iJL59lh4IJA)