Michael Woods

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EDUCATION

Master of Science in Engineering, Computer and Information Science
University of Pennsylvania   Jan. 2012 – May 2015

Coursework in machine learning, computer vision, physically-based rendering,
and computational linguistics.

Bachelor of Science, Computer Science
Rutgers, the State University of New Jersey   Jan. 2003 – May 2007

WORK
EXPERIENCE

Blackfynn   Philadelphia, PA
Engineering Manager   June 2019 – Present

- 80/20 time split between engineering and 1:1 career development meetings with 4 direct reports.
- Designed and implemented a metadata graph/data modeling service in support of the NIH Stimulating Peripheral Activity to Relieve Conditions (SPARC) program.
- Conducted performance tuning and refactoring work on core services responsible for file upload and metadata search, increasing request throughput and decreasing response time.

Senior Engineer   Nov. 2017 – June 2019

- Individual contributor to the Blackfynn Research Data Management Platform (RDMP), associated services, and developer tooling / documentation.
- Project lead for the Blackfynn agent (written in Rust), a locally runnable tool for interacting with the Data Management platform. Capabilities include: simplifying bulk file upload to the platform; streaming and caching time-series data for local consumers like the official Blackfynn Python and Matlab libraries; performing data general data management operations through a convenient CLI interface.

Intrinsic   San Francisco, CA
Software Engineer   Apr. 2016 – Nov. 2017

- Core engineer for the design and implementation of Intrinsic's flagship product, a secure, Node.js library based on user-authorable, declarative security policies derived from the architecture outlined in *Hails: Protecting Data Privacy in Untrusted Web Applications* [https://www.usenix.org/node/170829].

- Wrote tools to analyze the package dependency graph of a Javascript program, revealing useful metrics regarding the size and scope of its attack surface.

- Wrote a compiler and associated tooling to greatly speed up a previously labor-intensive task, mainly virtualizing the Node.js standard library as well as popular third-party libraries.

Yelp, Inc.   San Francisco, CA
Software Engineer   Aug. 2015 – Apr. 2016

- Implemented core consumer features and bug fixes on the Yelp Android and iOS mobile applications.

- Enhanced the way metrics were collected on both mobile and backend products to improve the data quality (location, hours of operation, etc.) of businesses listed on Yelp.

- Performed troubleshooting and contributed performance enhancements to Yelp's email sending infrastructure.

- Contributed enhancements and bug fixes for internal tools used by Yelp's team of community ambassadors.

Abramson Cancer Center, University of Pennsylvania   Philadelphia, PA
Application Developer   Nov. 2010 – May 2015

- Created the first iteration of the Abramson Cancer Center Applied Research Database (ACCARD), a unified clinical and research data aggregation platform that simplified the day-to-day data management and analysis tasks of cancer researchers.

- Wrote an interactive data exploration tool that allowed non-technical staff to create, save, and transform database queries and reports via a responsive web interface.

AmeriFlex   Mt. Laurel, NJ
Software Developer   Apr. 2010 – Nov. 2010

- Created and maintained a number of in-house tools that automated many of the tedious and error-prone tasks conducted daily by business staff.

- Reverse engineered and subsequently rewrote an undocumented proprietary ACH payment processing system critical to the functioning and profitability of the business.

New Jersey State Parole Board   Trenton, NJ
Software Developer   June 2007 – Apr. 2010

- Developed a public-facing geographic parolee search tool with an integrated absconder tip submission feature. With the help of the public, a number of useful tips were received by the tool that led to the apprehension of fugitive parolees.

TECHNICAL SKILLS   Proficiency in Python, Java, Scala, Rust, Javascript

Experience with flow/Typescript, react, express, flask, PostgreSQL, Neo4j,
Redis, sqlalchemy, slick, scikit-learn, pandas, git + gerrit/GitHub,
Jenkins/TravisCI, AWS, docker, terraform

PROJECTS
& PORTFOLIO   http://mikeswoods.github.io

https://www.linkedin.com/in/michael-woods-82696953