Ryan Schachte

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Education

- **Arizona State University** — Tempe, AZ
  Master of Science in Computer Science; GPA: 3.85 — *Dec. 2016 – Dec. 2017*
- **Arizona State University** — Tempe, AZ
  Bachelor of Science in Computer Science; GPA: 3.8 — *Aug. 2013 – Dec. 2016*

Experience

- **Nordstrom** — Seattle, WA (Remote)
  Senior Software Engineer — *Feb 2020 - Present*
  - **Graphs & Event-Streaming**: Lead engineer on a new platform focused on real-time identity resolution. Led the architectural design and implementation of a real-time graph system. This platform is responsible for tracking large-scale subgraphs of identities for both marketing use-cases and fraud within Nordstrom. Developed automated deployment pipelines via Kubernetes & Gitlab, alerting/metrics with New Relic, event-driven data pipelines via Kafka, big data in Spark & Airflow and backend in Java and Python. Infrastructure automation is managed via Terraform.
  - **Contributions**: Created Avro to ORC conversion engine to increase large-scale (10TB) queries over 10x performance with data delivery in real-time. Led research and implementation of experimental identity tracking platform for fraud to reduce over $100M per annum loss within the e-commerce business of Nordstrom.com. Implemented CCPA (California Consumer Privacy Act) data pipeline to purge customer data upon request.
- **Connexta** — Phoenix, AZ
  Software Engineer III — *Jan 2018 - Feb 2020*
  - **Geo-Int & Federated Search**: Engineer working on an open-source federated search engine for the government. Large focus on geospatial search, query federation and user-experience design. Led a team of 6 engineers to deliver backend and frontend work for the Geospatial Intelligence Agency and L3 Harris Corp.
  - **Technical Stack**: I leveraged React/Next.JS and GraphQL for frontend search and geospatial visualizations. Graphical visualizations were done via OpenStreetMap and Cesium. The backend stack leveraged Java 11, AWS, Karaf, Spring, Docker.
- **ExxonMobil** — Houston, TX
  Software Engineer Co-Op — *Summer 2016 & Fall 2017*
  - **Backend Platform Development**: Developed user-centered geophysical monitoring platform, utilizing Azure, ASP.NET Core and Angular for the single-page front-end app. Platform will save 1000+ hours of analysis annually through automation. Integrated real-time, interactive mapping component to track oil well pressures utilizing MapBox & Leaflet.
  - **DevOps**: Scaled out & implemented first usages of Chef into company infrastructure for managing oil wells at scale. Automated the entire build and deployment process for oil well machines Saving the company over 50 hours of manual labor per deployment.
- **Allstate Insurance, CompoZed Labs** — Tempe, AZ
  Software Engineer Intern — *Sept. 2016 - May 2017*
  - **Cloud Application Development**: Intern created internal tools to manage company processes, project deadlines and team assignments within the lab. Designed custom applications utilizing React/Redux with Node.JS backend and Mongo DB. Pair programming, agile, sprint-based, test-driven development.
- **IBM** — Austin, TX
  Software Engineer Intern — *Summer 2016*
  - **Cloud Security**: Intern working on Bluemix cloud security team developing beta edition of key protect, an encryption management vault for encrypted secrets. Designed custom scaling algorithms utilizing LXD containers, Linux, Watchdog and Python. Integrated real-time monitoring for the SRE team using Sensu and Pager duty based on key access volume.

://www.overleaf.com/project/5c38d6a2e8cde725b300ee86 IntelChandler, AZ Software Engineer InternSummer 2015

- **Firmware Engineering**: Worked on XPoint memory architecture team. Implemented custom logging platform into firmware to track failures within the bootloader. Developed automated bit error correction program that scraped and organized firmware tests into excel sheets for the business on a daily interval.

Personal Projects - Available at github.com/schachte

- **Engineering Youtube Channel (The Simple Engineer)**: YouTube.Ryan-Schachte.com - Videos teaching Math and Comp Sci. Over 24,000+ subscribers. Tons of videos teaching algorithms, technologies and engineering concepts to hundreds of thousands of viewers.
- **Mermrender**: UML/Diagram rendering tool for markdown docs. Built using Node.js/Mermaid.js. Featured on front-page of HackerNews.
- **Git-Enforcer Github Bot**: Github bot used to enforce structure and rulesets on respositories to maintain high quality and assurance throughout a given codebase. Featured on front-page of HackerNews and runner-up award at Amsterdam Javascript annual conference.
- **WIPCream Github Bot**: Automated bot used to analyze number of work-in-progress (WIP) pull reuqests to ensure they don't exceed a configurable limit. Keeps the number of pull-requests open concurrently under a reasonable limit to promote code reviews.
- **Simplex Programming Language & Interpreter**: Custom interpreter built from scratch using Java for an object oriented programming language. (Not fully completed)
- **Slack Emoji Bot**: Slack.Ryan-Schachte.com - Python CLI tool auto converts faces to slack emojis using convex hull.
- **Bookium**: Bookium.Ryan-Schachte.com - Instantly downloads transfers books to kindle from web-app in seconds.
- **AirBnB Data Viz**: AirBnb.Ryan-Schachte.com - Data viz tool to analyze data trends for maximizing AirBnb profit.

Programming Skills

- **Languages**: Java, Javascript, Python, C, Hack Assembly, Bash, C#, Node, HTML, CSS
- **Technologies/Skills**: Terraform, Kubernetes, Spring, Airflow, CI/CD, IntelliJ, OSGI, Karaf, DI frameworks, AWS, Design patterns, Windows, React/Redux, Visual Studio, Docker, IntelliJ, Vim, Git, Chef, Django, Typescript, LXD, Linux, Algos/Data Structures

Extracurricular Learning/Research

- **Volunteer Instructor - FreeCodeCamp**: Authored a 2-hour course for the FreeCodeCamp non-profit on recursion and recursive logic.
- **Michener Research Grant Awardee**: Co-Author on a funded research grant that analyzes how between-group movement drive relatedness within carpenter bee social groups whilst utilizing RFID tracking en-masse to track behavior within nests. (Currently in progress)