Douglas J. Smith

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WORK EXPERIENCE

Capital One New York, NY

Senior Software Engineer, Backend *April 2023 - Present*

- Modernizing internal data transfer by implementing API presenting new data models with technical support for existing mainframe storage as well as migration support for new storage systems
- Modeling data for new internal APIs by mapping legacy data models to planned business use cases
- Maintaining product security/reliability via regular vulnerability remediation and production support rotations

Google Seattle, WA

Software Engineer II, Cloud Billing *July 2019 - April 2023*

- Improved billing UX with 24x more granular cost detail (hour-level detail instead of day-level) by processing large amounts of data at low latency via batch-processing pipelines written in Java
- Achieved 30x throughput increase by designing and implementing the necessary queuing systems and priority heuristics to further parallelize processing without decreasing latency
- Implemented custom monitoring systems for all processing to ensure data correctness
- Increased product uptime by participating in oncall pager rotation with 24/7 issue response SLA
- Reduced oncall workload by leading initiative to document and automate high-toil processes

Software Engineering Intern, Cloud Kubernetes *May 2018 - August 2018*

- Reduced barriers to launch and operate Kubernetes clusters on GCP by extending console-emulation frontend to support product-specific commands
- Increased frontend usability by improving frontend documentation and authorization workflow

Engineering Practicum Intern, AdSense *May 2017 - August 2017*

- Performed analysis of counterfactual tests for Google AdSense algorithms by implementing a system for comparison of experiments as a C++ post-processing pipeline
- Increased clarity of counterfactual testing results by developing an Angular2 web application to accept user field queries and display data in graphical format

Viakoo Mountain View, CA

Machine Learning Intern *January 2018 - May 2018*

- Added universal computer-vision-based insights (e.g. anomaly detection) to universal device-management system by developing a system for converting images gathered from security cameras to TensorFlow data structures
- Increased coverage of universal device processing application by implementing general support for http-based camera devices and implementing driver for a web-based security camera brand

Crcl Notre Dame, IN

Project Manager and Developer, Android and Web Teams *August 2016 - January 2018*

- Contributed to common UX specification for a venue-reviewing social media application by participating in graphic design and usability brainstorming sessions
- Implemented specified UX as Android application in Java interacting with REST API
- Increased available SWE hours and supported web development by assisting in technical reviews and contributing coding work to achieve critical deadlines

EDUCATION

University of Notre Dame Notre Dame, IN

Bachelors of Science and Engineering *August 2015 - May 2019*

RESEARCH

National Tsing Hua University

Embedded Systems Research *May 2016 - August 2016*

- Designed system for dynamically testing circuits and fault lists for identical faults with a C++ binary that decomposed fault descriptions to test for equivalent outputs
- Refactored ABC circuit modeling library to function with C/C++ executables, optimizing for modeling purposes

SKILLS

Java, Python, GoLang, C/C++, JavaScript/TypeScript, Distributed Computing/Cloud Computing, Machine Learning/AI, API Design, Object Oriented Programming, Functional Programming, Bash Scripting, Version Control (Git, Mercurial, Perforce), Amazon Web Services (AWS), Google Cloud Product (GCP), Agile Development, Test Driven Development, Documentation