Stephen Spalding

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Summary

Through developing software for nuclear reactors, 3d x-ray machines, and OpenTable's SMS messaging system I've learned the value of simplicity and robustness. I believe in leading through earned respect and mutual trust. I enjoy solving problems that don't have solutions.

Experience

Netflix | Senior/Staff Software Engineer   2017 - present

- Devised and led implementation of sharding scheme for Netflix API which improved resilience, reduced latency, and saves $10M/yr
- Embedded with resilience engineering to develop innovative server capacity test framework based on PID control theory
- Led development of Netflix's Federating GraphQL Gateway. This platform now powers >60 Netflix Studio applications

OpenTable | Senior Software Engineer   2015 - 2016

- Led development of OpenTable's SMS/email messaging service
- Scaled messaging service 300x to handle millions of transactional messages per month
- Reduced worst case message latency from 10 minutes to 10 seconds

Tennessee Valley Authority | I&C Engineer   2009 - 2015

- Supported Nuclear Core Monitoring systems across 6 nuclear units
- In charge of implementing cyber security controls for various nuclear systems
- Employed Forward Error Correction to allow reliable streaming through a data diode
- Initiated and developed new software to calculate Spent Fuel Pool time-to-boil (post Fukushima)

GE Healthcare | Research Intern   2008

- Researched tomosynthesis in digital mammography
- Developed image correction process for tomosynthesis image acquisition
- Created test for determination of lossy compression threshold for tomographic images

Education

Master of Science ECE (Electrical and Computer Engineering)   2008

Georgia Institute of Technology, Metz, France
Specialization in Telecommunications, Networks, and Signal Processing

Master Recherche SIAO (Signals, Images, Acoustics and Optimization)   2008

Institut National Polytechnique (INP-ENSEEIHT), Toulouse, France
Specialization in Signal and Image Processing

Bachelor of Science in Engineering ECE - with Honors   2006

Mercer University, Macon, GA
Selected by College of Engineering, "Outstanding Electrical Engineering Student."

Skills

Front End / UI: Photographer. Typographic enthusiast. Passionate about user experience. I appreciate the simplicity that React.js affords.

Programming: Kotlin, Java, Python, Clojure, Haskell, Fortran, Go, Typescript ... Whatever is best suited for the task at hand

Hardware: I built my own induction wah pedal.

Talks

How Netflix Scales its API with GraphQL Federation
QCon Plus 2020

The Network is Reliable and Other Tall Tales
Chadev 2016

The UNIX Philosophy
Chadev 2015