James Ravn — Software Engineer

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Summary

Software engineer with 15 years of experience in software development and project leadership. Primarily interested in backend engineering, infrastructure automation, and distributed systems.

Experience

Sky   **London, UK**
Consultant (*Energized Work/Ravn Consulting*)   *2014–Current*

- Co-creator of core engineering team for online video platform. On-going work.
  - Built platform from ground up on AWS, Kubernetes, and Cassandra, with custom built Go, Gradle, and Jenkins components. Made several contributions to Kubernetes upstream.
  - Enabled rapid delivery to production for 5 application teams, well within deadlines. Significant involvement on the full stack from bare VM to backend applications, including performance testing and team process.
- Contributed to online video backend, serving Sky Go, Now TV, and wholesale providers.
  - Scaled Dropwizard applications on AWS and Cassandra to serve 10,000 TPS.
  - Led improvements to testing strategy for codebase.
  - Built non-disruptive deployment in Ansible, including custom python modules, for zero down-time deploys to AWS.
- Content metadata ingestion project with high message reliability requirement.
  - Wrote dao layer to support XA transactions across Mule and Mysql.
  - Solved ActiveMQ bugs with XA transactions that plagued the team for months.
  - Built testing framework and infrastructure for continuous integration of Puppet modules.

Camelot National Lottery   **London, UK**
Senior Software Engineer   *2013–2014*

- Core contributor to the next generation lottery platform serving all of the UK.
  - Significant work on subscriptions with direct debit (BACS), serving 1 million accounts, considered the most complex part of the codebase. Made it production ready for go-live and oversaw it's rollout.
  - Advocated for and successfully implemented our branching and code review process, resulting in ¿90% green builds from ~10%, and improved code quality and communication.

IMC Financial Markets ⟨right⟩ **Chicago, IL**
Senior Software Engineer ⟨right⟩ *2009–2013*

- Senior developer on automated trading team. Top ranked by management and peers.
- Designed and implemented the core valuation library and parameter server, used across the firm for pricing of derivatives.
  - Enabled new strategies and enhanced existing ones with significant contribution to PnL.
  - Implemented in core Java with minimal dependencies and high concurrency, utilizing Java concurrency primitives.
  - Novel generic pricing framework built using Java annotated classes and graph analysis to build a pricing DAG. Cucumber specs for building acceptance criteria of specific pricing combinations.
  - High performance server component for persisting and propagating parameters of the pricing models, built with Java, ActiveMQ, and Mysql/Mongo.
- Replaced the company wide ant-based build system with Maven, leading to an ˜80% reduction in build times and significant code reduction.
- Performance improvements to the primary feed component, increasing capacity from 2 million to over 30 million states per minute.
- Developed jabber bot and accompanying pidgin plugin in C to support broker traders over chat.
- Mentored junior developers, hosted book clubs, and brown bag lunches on various topics.

Motorola ⟨right⟩ **Libertyville, IL**
Senior Software Engineer ⟨right⟩ *2006–2009*

- Consistently ranked in the top 10% of company employees.
- Designed novel software delivery estimation model that became the defacto estimation tool for the mobile software organization due to its simplicity and usefulness. (Excel/VBA)
- Lead developer of software quality website used by software management, which led to significant improvements in delivery estimation and resource allocation. (ASP.NET)
- Implemented defect triage web tool which improved turnaround time for bug fixes. (Rails)

Education

Georgia Tech ⟨right⟩ **4.0**
M.S. Computer Science, Computing Specialization ⟨right⟩ *2021*
Courses included distributed computing, high performance computing, and binary exploitation.

University of California, Los Angeles
B.S. Computer Science and Engineering ⟨right⟩ *2005*