

# James Ravn — Software Engineer

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## About

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- Software engineer with 15 years of experience in software development and technical leadership.
- In depth knowledge of infrastructure automation and building cloud based platforms (AWS/GCP).
- Able to run projects and manage the software life cycle from start to production.
- Primarily interested in distributed systems, infrastructure automation, and systems programming.

## Experience

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### CECG

London, UK

*Principal Consultant*

2020–Current

- As one of the first consultants of CECG, a boutique consulting firm specializing in infrastructure and platforms, I have been engaged with Sky/NBCU to provide technical and leadership expertise for the core engineering platform. It supports hundreds of software teams globally and hosts Sky OVP and NBCU Peacock services.
- Design and implementation of the GCP based core platform. (Pulumi, Go, Typescript, K8s)

### Lightbend

London, UK

*Tech Lead / Principal Software Engineer*

2018–2020

- Tech lead for Lightbend Console, a monitoring product built for Akka/Play/Lagom. Led team of 5 engineers. (Prometheus, K8s, Go, Scala)
- Principal software engineer in the Office of the CTO. Worked on cloudstate.io, a managed Akka serverless platform. (GCP, K8s, Go, Scala, Akka)

### Sky

London, UK

*Principal Software Engineer*

2014–2018

- Co-created the core engineering team for Sky's commerce and online video platforms.
- Advocated for, architected and implemented a common development platform and CI/CD process built on Kubernetes. The platform is built as a PaaS and deployed daily into production. This platform has grown to support the majority of Sky and NBCU online services including Peacock. It hosts hundreds of development teams and consists of clusters with hundreds of nodes, with production peaks routing 200k-300k requests per second. (Golang, Terraform, Ansible, AWS, Jenkins, Gradle)
- Kubernetes contributor with several dozen contributions and improvements, particularly in the areas of storage and scalability. Also created and contributed to related open source projects, including feed (ingress controller), fluent-bit, merlin (IPVS manager), etcd-bootstrap (500k+ downloads), and cqlmigrate (Cassandra schema migrations). (Golang, C)

**Energized Work***Software Consultant***London, UK**

2014–2016

- Consultant for EW, a boutique software consultancy specializing in XP, Agile, and software delivery.

**Camelot***Senior Software Engineer***London, UK**

2013–2014

- Worked on the next generation lottery platform for the UK. I made significant contributions to the subscriptions component, considered the most complex part of the code base. It serves over 1 million users with direct debit using BACS. (Java, Spring, Gradle, Grails)
- Heavily involved in devops, I advocated and implemented the branching and code review process, rescuing a very broken build process to get >90% green builds from a 10% rate when I joined. (Puppet, Gitlab, Jenkins)

**IMC Financial Markets***Senior Software Engineer***Chicago, IL**

2009–2013

- Senior engineer on automated trading team. Top ranked by management and peers.
- Designed and implemented the core valuation library and parameter server, leveraged across the firm for pricing of derivatives.
  - Enabled new strategies and enhanced existing ones with significant contribution to PnL. It consolidated many separate, fragmented components used by different trading desks.
  - Implemented in core Java with minimal dependencies and high concurrency, utilizing Java concurrency primitives.
  - Novel design 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. Created custom Mongo Java driver to enable high throughput. (Java, ActiveMQ, Mysql/Mongo)
- Replaced the company wide ant-based build system with Maven, leading to an 80% reduction in build times and significant code reduction. This had a large impact on developer productivity.
- Performance improvements to the primary feed component which groups orders and has significant state, increasing capacity from 2 million to >30 million orders per minute. (Java)
- Developed jabber bot and accompanying pidgin plugin to support broker traders over chat. (C)
- Mentored junior developers, hosted book clubs, and brown bag lunches on various topics.

**Motorola***Senior Software Engineer***Libertyville, IL**

2006–2009

- Consistently ranked in the top 10% of company employees.
- Designed novel software delivery estimation model utilizing a combination of linear regression and Markov chains on historical data. It became the de facto 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 provided multiple data aggregation and analysis models from various disparate sources. This led to significant improvements in delivery estimation and resource allocation. (ASP.NET, Rails)

## Education

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### **Georgia Institute of Technology**

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*M.S. Computer Science, Computing Specialization*

2021

Courses included distributed computing, high performance computing, and binary exploitation. One of two students in my class to fully implement dslabs. Rank 2/150 in binary exploitation lab.

### **University of California, Los Angeles**

*B.S. Computer Science and Engineering*

2005