

John Lindsay Orr

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Executive Summary

I am a full-stack cloud engineer with decades' experience across start-ups, the public sector, and Fortune 500 companies, building applications used by millions. I work with stakeholders across the board in situations of high complexity and ambiguity to deliver beautiful, robust solutions to critical business needs.

Education

PhD Mathematics

King's College,
University of London

Certificate of Advanced Study in Mathematics

University of Cambridge
With Distinction

BSc Mathematics

Imperial College,
University of London
First Class Honours

Certifications

AWS Cert Developer (Associate)
2024

AWS Cert Cloud Practitioner
2024

Sun Cert Java Developer
2000

Sun Cert Java Programmer
2000

Status

Based in the UK, I am authorised to live and work in the US and the UK.

Core Technical Skills

see: <http://johnorr.uk#skills>

Cloud computing (AWS, GCP, serverless, CI/CD, IaC, Terraform, Kubernetes)

Cloud data storage (RDBMS, noSQL, Spanner, GCP Datastore, etc)

TypeScript/JavaScript,
Java, Python, HTML/CSS

Angular, Lit, Polymer, jQuery,
Google internal F/E, etc

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Highlights

- **Full-stack engineer** equally adept at building beautiful front ends, robust infrastructure, APIs, or back-end solutions.
- **Cloud native** designing and building exclusively for the cloud since 2011.
- **PhD in mathematics** with major accomplishments as a **researcher, start-up principal, tech lead (TL), individual contributor (IC)** SWE, and **educator/mentor**

Professional Experience

Kooth: Platform Squad

Senior Platform Engineer

January 2025 - present

- Rapid onboarding and productivity: In 2025, I contributed over 512 PRs, wrote 23 technical docs (spikes, design docs, ADRs), created over 140 sprint stories and reviewed over 375 PRs.
- Designed & developed IaC framework for our core product's infrastructure CI/CD with Terraform, GitHub Actions pipelines, and GCP WIF/IAM
- Designed & developed framework for deploying Kubernetes apps with Kustomize, GitHub Actions, containerisation, etc
- Refactored legacy IaC to improve reusability, reliability, and security.
- Participated in and led agile planning, standups, and retrospectives; presented at company-wide progress reports

Planned Career Break

Career Development

July 2024 - December 2024

- Planned time off to acquire AWS-specific cloud computing skills for career pivot.
- Experience with EC2, S3, Lambda, VPC, ECS, CloudFormation, CDK, Route53, CloudFront, Kinesis, CodePipeline
- Earned [AWS Certified Developer](#) and [AWS Certified Cloud Practitioner](#)

Google UK: Core/EngEDU

Senior Software Engineer

2017 - June 2024

- Tech lead (TL) and individual contributor (IC) for teams of 3-5 SWEs launching internal educational web-apps on-schedule and within budget.
- Set technical direction by writing and critiquing design documents, establishing patterns, unblocking pain points, and implementing complex features.
- Mentored and on-boarded junior engineers.
- 37 spot bonuses/peer bonuses

Core Technical Skills (cont)

Webservices, Django, Flask,
Google internal (Boq), etc
Templating, Jinja, Django, Soy, etc
Microservices, REST, gRPC
Testing (unit, integration,
Selenium, Jasmine, etc)
CI/CD, code review, agile
Linux sysadmin

Code Samples on GitHub

[AWS CDK/Cloud Formation](#)

[TypeScript/React](#)

[WebsiteCrawler \(Python\)](#)

[Site Builder \(Python\)](#)

[Google CourseBuilder](#)

Google: Google Research/EngEDU

Senior Software Engineer

2013 - 2017

- Front-end tech lead for platform powering large external educational projects including Applied Digital Skills and CS First serving millions.
- Led renovation of research.google.com to provide a modern responsive look to the public face of Google Research.
see: <http://johnorr.uk#rgc>
- Front-end tech lead on Google's Course Builder, an open-source platform for delivering education at massive scale.
see: <http://johnorr.uk#cb>

Google: GeoCommerce

Senior Software Engineer

2011 - 2012

- Software engineer and API/server lead on Google's unified in-page web buy-flow.
see: <http://johnorr.uk#wallet>
- Led the design and development of the REST API service providing a common buy-flow experience across key Google web properties such as Google Play, YouTube, Google Offers, and Google Drive.
- Product was used by external merchants such as Rovio and Kabam and processed over \$1bn transactions over lifespan.

University of Nebraska - Lincoln: Department of Mathematics

Professor and Vice Chair at R1 university

1991 - 2011

- **Full Professor 2001 - 2011**; Associate Professor 1995 - 2001; Assistant Professor 1991 - 1995
- Twice appointed **Departmental Vice Chair**; planned academic program taught by 100+ faculty/GTAs to 3,000+ students, hired and mentored 70+ graduate teaching assistants.
- Author of **25+ research papers** in premier refereed journals.
see: <http://johnorr.uk#pubs>
- Taught 50+ university courses running the gamut of the undergraduate and graduate mathematics curriculum.
see: <http://johnorr.uk#teach>
- Teaching awards from the department, the college, and the university parents' association.
- Delivered almost 100 colloquia, invited seminars, and conference talks at national and international conferences.
- Principal investigator (PI) on grants and contracts totalling over \$1m, including multiple NSF individual researcher grants.
see: <http://johnorr.uk#cv>

Brownstone Research: Principal at Ed-Tech Start-up

Chief Architect

2001 - 2005

- Led design and development of an on-line student assessment system from first conception to a mature product in the market
- Integrated into the websites of 4 of the leading college textbook publishers, and delivered content from hundreds of college textbooks, primarily in STEM disciplines.

- Served about 400,000 students in 2,000 classes world-wide at peak.
- Led a partnership with Maplesoft to develop the first versions of Maplesoft's educational product MapleTA (now Mobius).
- Ultimately acquired by Blackboard (2010)

see: <http://johnorr.uk#edu>

University of Waterloo: Department of Mathematics

Postdoctoral Research Assistant

1990 - 1991

- Two-year postdoctoral research grant funded by NSERC (Canada).

University of Lancaster: Department of Mathematics

Postdoctoral Research Assistant

1989 - 1990

- Two-year postdoctoral research position funded by SERC (UK)