

James Robb

Reykjavik, Iceland

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Experience

Yellowbrick Data

Reykjavik, Iceland

SENIOR SOFTWARE ENGINEER - DATA WAREHOUSE CORE DEVELOPMENT TEAM

Dec 2022 - Dec 2025

- Architected and implemented a system to collect and query Prometheus metrics across hundreds of customer systems in real-time.
- Led design and implementation of customer and internal dashboards for monitoring system health, and the underlying instrumentation.
- Served as technical owner for telemetry and observability across the core platform.
- Led design and implementation of an advanced query filtering feature enabling 23x speed-up on important customer workloads.
- Architected and implemented fixes to critical bugs in the Yellowbrick query planner (forked version of Postgres).
- Automated large portions of above items with LLM-based IDE and chat tools.
- PostgreSQL Internals, C, C++, Java, Golang, Python, Prometheus, Thanos, Grafana, Kubernetes, Terraform, AWS.

Jiko

Reykjavik, Iceland

SENIOR SOFTWARE ENGINEER - DEVELOPER EXPERIENCE TEAM

Jun 2022 - Nov 2022

- Owned and maintained all CI/CD pipelines for Jiko's production banking platform.
- Owned and maintained Kubernetes and related infrastructure for production banking platform.
- Provided consulting on platform engineering and service integration to development teams.
- Python, Golang, ArgoCD, Kubernetes, Terraform

CCP Games

Reykjavik, Iceland

DISTRIBUTED SYSTEMS ENGINEER - PLATFORM TEAM

Jun 2020 - May 2022

- Architected, implemented, and maintained new distributed messaging platform, supporting 100k+ messages per second.
- Led adoption efforts to move development teams to new messaging platform and transition EVE Online away from monolithic architecture.
- Architected and implemented a new version of the solar system chat feature for Eve Online.
- Took full ownership of intern mentorship, including onboarding, technical direction, and ongoing feedback.
- Owned and maintained platform-wide Protobuf definitions and the corresponding internal SDKs for Golang/Python/C++.
- Owned and maintained the Eve Online public API.
- Golang, gRPC, Protobuf, RabbitMQ, Python, C++, Kubernetes, Prometheus, Grafana, Terraform, AWS.

Earlier Experience

Reykjavik University, Teaching Assistant and Software Developer

Reykjavik, Iceland

Jan 2016 - Apr 2020

Emory University, Teaching Assistant (Computer Security and Hacking)

Atlanta, Georgia, United States

Aug 2018 - Dec 2018

University of Iceland, Database Developer and Electric Circuit Designer

Reykjavik, Iceland

Jun 2016 - Aug 2016

Online Crime and Corruption Reporting Project, Software Developer

Sarajevo, Bosnia and Herzegovina

Mar 2015 - Apr 2015

GreenQloud (now NetApp), Software Developer and SCRUM Master

Reykjavik, Iceland

May 2013 - Apr 2014

Modern Earth Web Design, Software Developer

Winnipeg, Manitoba, Canada

Jan 2011 - Apr 2013

MidCanada Productions, Web and Media Developer

Winnipeg, Manitoba, Canada

Jan 2009 - Dec 2010

Geared Interactive, Co-Founder and Software Developer

Winnipeg, Manitoba, Canada

Jan 2008 - Dec 2010

Core Skills

Design and Theory	Distributed/Parallel Systems, System Architecture, Computer Security, API Design, Query Planning
Programming Languages	Golang, Python, C, C++, SQL
Technologies	PostgreSQL internals, gRPC, Protobuf, Linux
DevOps	AWS, Docker, Kubernetes, Terraform, Thanos, Prometheus, Grafana

Education

Reykjavik University

Reykjavik, Iceland

MSC IN COMPUTER SCIENCE

2018 - 2020

- Alan Turing Scholarship (full-tuition scholarship awarded to students with strong academic performance).
- Specialization in Real-Time Systems.
- Semester at Emory University in Atlanta, USA.
- Semester at the Max Planck Institute for Software Systems in Kaiserslautern, Germany.

Reykjavik University

Reykjavik, Iceland

BSC IN COMPUTER SCIENCE AND DISCRETE MATHEMATICS

2015 - 2018

- Dean's List 3 of 6 semesters - given to students with grades in the top 2-3%.

Research

Nested, but Separate: Isolating Unrelated Critical Sections in Real-Time Nested Locking

REYKJAVIK UNIVERSITY / MAX PLANCK INSTITUTE FOR SOFTWARE SYSTEMS

2020

Introduced a novel real-time fined-grained nested locking protocol for real-time systems. My protocol provides temporal isolation for latency-sensitive tasks that access (possibly) nested resources while remaining asymptotically optimal. The paper is published in the proceedings of the 32nd Euromicro Conference on Real-Time Systems. This research also served as the basis of my master's thesis.

Identifying Combinatorial Structures for Binary Strings and Set Partitions

REYKJAVIK UNIVERSITY

2018

Explored how to build combinatorial specifications for avoidance classes of binary strings and set partitions in my bachelor's thesis. I build upon the work of Bean et al. and the CombSpecSearcher system to do so. I show that one can find a combinatorial specification for any avoidance class of binary strings, and combinatorial specifications for many avoidance classes of set partitions.