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Johan Mickos

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sevenfourfour.dev

EDUCATION

M.Sc. Software Engineering of Distributed Systems
Royal Institute of Technology (KTH)
Thesis: Design of a Network Library for Continuous Deep Analytics

Sept. 2016 - Jun. 2018
Stockholm, Sweden

B.Sc. Computer Engineering
Boston University

Sept. 2010 – Aug. 2014
Boston, MA

PROFESSIONAL EXPERIENCE

Amazon | Software Development Engineer
Go, Java, Docker, AWS (ECS, DynamoDB, Kinesis, CodePipeline, CloudFormation, and more)
Backend web development of insurance claims services for Amazon Pharmacy (AP).

Jul. 2018 – Nov. 2022
Boston, MA

- Claims Team lead for several successful AP feature launches. I met with product stakeholders to work through ambiguities, and diligently kept up-to-date project plans and led regular meetings with the team members.
- Responsible for core design and scalable architecture of multiple microservices.
- Drove operational readiness efforts to prepare services for product launch.
    - Implemented high throughput stateful load tests, which let us fix several concurrency and scalability bugs.
    - Established time-saving architectural patterns for system integrations (built-in metrics, monitoring, auto-generated clients, and more).
- Led "brown bag" and knowledge transfer presentations to share technical domain knowledge across teams.
- Participated in the interviewing and hiring process, as well as the mentoring and onboarding of new teammates.

RISE SICS | Research Engineer
Rust, AWS (EC2, VPC)
Development of the Continuous Deep Analytics (CDA) project and Kompact asynchronous actor framework in Rust, focusing on a library for core networking support (TCP, UDP, UDT).

Jun. 2018 – Aug. 2018
Stockholm, Sweden

- Designed software architecture for point-to-point communication over various network protocols.
- Implemented actor registration and lookup management, guiding design choices and trade-offs based on expected usage patterns.

KTH | Teaching Assistant, Distributed Systems
Erlang, distributed algorithms

Sept. 2017 – Nov. 2017
Stockholm, Sweden

- Assisted in teaching of distributed systems concepts such as failure detection, logical time, group membership services, and distributed hash table protocols.

ViralGains | Full Stack Software Engineer
Groovy/Grails, Java, EC2, JavaScript, Backbone.js, Kafka, Druid, Hadoop ML ecosystem

Sept. 2014 – Jun. 2016
Boston, MA

- Implemented new features for the ad-tech platform (VPAID integration, real-time advertisement bidding, Spark machine learning architecture scaffolding, customer-facing workflows).
- Developed dashboards for tracking realtime metrics from Kafka and Druid, which were used by the product team to drive business decisions.

Axcient | Software Engineer Intern
C, Bash, Valgrind, gdb
Backend development for Axcient's Recovery-as-a-Service cloud platform.

Jun. 2013 – Aug. 2013
Mountain View, CA

- Created a unified JSON-based configuration management library in C, which was used across all applications.
- Developed APIs for communication between edge nodes and on-premise management nodes.
- Improved and expanded upon an in-memory key-value pair library used for configuration of the product.

SELECTED PROJECTS

Nacre: Stream Terminal Output to the Web
Go, WebSockets, Redis, Docker, DigitalOcean

nacre.dev

Application for piping commandline output to the Web and monitoring it with easily-shareable links.

Stormy Haystack: A Distributed Key-Value Store
Scala, distributed algorithms

github.com/johanmickos/stormy-haystack

Fault-tolerant, strongly-consistent distributed KV store based on abortable multi-Paxos using the actor framework Kompics.