Levi Szabo

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SOFTWARE ENGINEER

Cloud focused developer with 6+ years of experience developing customer-facing APIs and internal services, built on AWS with IAM and microservices in an Agile/SCRUM setup. Has experience with supporting legacy services, as well as transition to modernize, ensuring unit test as well as deep integration testing. Technical experience in Go and JavaScript with both NodeJS and Bun, React, Svelte, and Vue for presentation layers, Kubernetes and Terraform for cluster management, DataDog, Splunk, and PagerDuty for managing clustered server logs and providing a reliable uptime.

Microservices ● Scalable Architecture ● Cloud Native Design ● CI/CD ● Unit/Integration Testing ● NoSQL
Cloud Monitoring ● Version Control (VCS) ● Caching ● Streaming ● Message Queue ● Containerization

Languages: Go, JavaScript, Typescript, Scala
Web: HTML5, CSS3, HTMX, React
Web Services: REST, GraphQL, JSONRPC
Web/App Servers: NodeJS, Gin
Frameworks: Svelte, Express
Databases: Redis, MongoDB, Postgres
Design Patterns: Singleton, Factory, Observer, Reactive Programming/RX, Repository, MVC
SDLC: Agile, Scrum
Tools: Git, Github, Docker, AWS, IAM, ALB, ELB, S3, DynamoDB, EC2, Lambda, GCP, Kubernetes, Kubectl, Terraform, Linux, Jenkins, Datadog, Splunk, Jira
Platforms: Unix

PROFESSIONAL EXPERIENCE

*CAREER NOTE: Completed on-campus studies and currently taking distance education courses to complete a **Master's Degree in Computer Science** (Available for full-time, W-2 employment).*

Instructure, Salt Lake City, USA ● 08/2020 – 05/2024
An education technology company with a mission to elevate student success,

Software Engineer (Remote)
Performed cloud focused development activies for the file storage and real time systems of Canvas LMS.
- Developed Go and JavaScript microservices handling fast cloud file management and real time notifications running on AWS that serve more than a million students a day.
- Single-handedly modernized legacy Ruby services that dealt with rotating symmetric key pairs used to secure all public APIs, moving them to a modern stack of NodeJS, Bun and Ava, simplifying future developer experience.
- Managed 7 * 3 k8s clusters of production of development environments, where all the company's internal facing services are deployed, using cloud-native monitoring tools like Datadog and Splunk, achieved triple zero uptime.
- Optimized S3 storage for images and videos uploaded as course data, saving the company $200,000 monthly.

Technologies Used: *Go, JavaScript, Kubernetes, Terraform, AWS, MongoDB, S3, DynamoDB, IAM, Jenkins, Git.*

QANPlatform, Budapest, HU ● 07/2018 – 07/2020
Blockchain startup company working on making smart contracts quantum-safe and accessible for any developer.

Software Engineer
Created a runtime that enables developers to write smart contracts in the language of their choice.
- Implemented a network-enabled embedded virtual machine using very optimized Go code for running webassembly software on a distributed, cooperative system.
- Developed an intermediate layer between 23 programming languages and a custom smart contract framework using a common compiler made in Scala, enabling a true multi-language toolchain.
- Managed multiple clusters of bootstrap nodes deployed across different cloud providers using Kubernetes, making onboarding easy for users.
- Deployed an on-premises chain for a vehicle assembly line, making the steps of the production decoupled from a central controller program, providing a modern, declarative interface for the machine operators.

Technologies Used: *Go, Scala, JavaScript, Kubernetes, AWS, GCP, JSONRPC, CircleCI, Git.*

University of Szeged, Szeged, HU ● 10/2016 – 03/2018
The university's own development team.
Full Stack Software Engineer
Worked on multiple, web and data focused projects for the in-house development in the university.
- Optimized and upgraded the LMS with easier course management tools and ability to use e-learning resources, with a Ruby backend and JavaScript frontend, making online education more accessible.
- Developed an inventory and ordering website for a charity kitchen using NodeJS, MongoDB, and React, with resource management and public menu features, making it accessible for both employees and customers.
- Used NodeJS and React to provide a real-time streaming platform for the university TV channel.
- Configured and managed an on-premises cluster with Kubernetes where the internal services and the LMS of the university are deployed, providing ease of development and deployment.
- Implemented a Scala and Spark analysis pipeline on 50 years of global allergy data from 120 universities, supporting research on the impact of allergy seasons

Technologies Used: *JavaScript, React, MongoDB, Scala, Kubernetes, SVN.*

FREELANCE EXPERIENCE

HUNOR space program, Budapest, HU ● 09/2023 – 02/2024
Space research company, focusing on edge devices.
Engineer
Iterative design
- Assisted with the design and development of a device using Python for generative CAD work, used for physical data visualization in space.
- Ran and evaluated test data from several dry runs using a data processing pipeline set up using Go, making necessary tweaks for the final design easier.

Technologies Used: *Go, Python, CAD.*

ACADEMIC PROJECTS

Maharishi International University (2024)
Soptify statistics: Streamed data from the Spotify API into a big data pipeline built on Hadoop, and used PySpark to aggregate it, to output to a MongoDB instance, from which I visualized using Jupyter. Utilized Hadoop, PySpark, MongoDB, NodeJS.

PERSONAL PROJECTS

Lambda at home 2023: After Heroku was made unusable for hobbyists, I developed a solution that would give people Heroku-like experience hosted on their own server. Implemented a Kubernetes-like service management system with automatic TLS functionality, a custom reverse proxy solution and a built-in load balancer. Utilized Go, Docker, Svelte.

Random Word API 2018: In 2018 as I was making a small typing game, I noticed a lack of publicly available services that would provide someone with words as text. Implemented a backend service using Scala, which became the first hit on Google. After a DDOS attempt I also implemented a custom rate limiter using Redis as a cache. Utilized Scala, Redis, Docker, Heroku.

EDUCATION

Master of Science in Computer Science
(In progress via distance education; expected completion 12/2026)
Maharishi International University, Fairfield, Iowa

Key Courses: Web Application Programming, Modern Web Applications, Web development, Big Data, Algorithms

Bachelor of Science in Computer Science
University of Szeged, Szeged, Hungary (05/2020)