Jacob **Casper**

SENIOR SOFTWARE ENGINEER

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Objective

Full stack developer with DevOps experience. Loves privacy by default. The kind of person who runs a local DNS. Interested in solving problems that make a difference.

Work Experience

H-E-B Grocery, LP   *Remote*
SENIOR SOFTWARE ENGINEER - DATA SOLUTIONS   *Apr. 2024 - Present*

- Develop multi-representation architecture for heterogenous pub-sub consumers on top of Python and Kafka.
- Allowed records in SQL, Delta Lake, S3, or Kafka topics to be represented in other formats, as well as backing a REST API.
- Configuration DSL based on jq allowed for remapping objects or executing SQL against DeltaTables.
- Productionalize and refactor AI models in a cross-team setting as Data Engineer.
- Greenfield ML projects with online feedback for search ranking to drive customer engagement 2-3%.

DefenseStorm, Inc.   *Remote*
LEAD DEVELOPER - BACKEND MICROSERVICE PLATFORM   *Nov. 2022 - Apr. 2024*

- Rewrote sequential workers as event-based workflow with parallelized execution.
- Enabled machine learning teams to incorporate alert detection models in alert generation by leveraging push-driven workflow.
- Rewrote notification logic to prevent degradations in external services from impacting core alerting stability and improve customer visible KPIs.
- Designed schemas, performed task breakdowns, and architected projects for a team of developers.

SENIOR SOFTWARE ENGINEER   *Jan. 2021 - Nov. 2022*

- Improved internal only service API structure to develop a customer integratable public API, with authorization and authentication.
- Developed near real-time, event-driven fraud detection framework; optimized using SQS, multi-threading and Java Promise APIs.
- Migrated existing U2F login support to WebAuthn seamlessly. Blog post

IBM - SoftLayer   *Dallas, Texas*
SOFTWARE DEVELOPER   *Apr. 2018 - Jan. 2021*

- Created a distributed worker architecture using RabbitMQ that reduced runtime of a 20-hour batch process to minutes.
- Enabled process visibility and communication between distributed services by creating a message passing framework.
- Designed alerting tool for Continuous Integration by scripting git internals to detect exact commit responsible for a test suite regression.

Skills

Languages	Python, Java, TypeScript, JavaScript, Go, Bash, PHP
Technologies	Linux, React, AWS, PostgreSQL, Kafka, ElasticSearch, Fargate, S3, RabbitMQ, systemd
Practices	CI/CD, GitHub Actions, Git, Docker, Serverless Cloud, REST APIs, Unit Testing

Education

North Carolina State University   *Raleigh, North Carolina*
B.S. IN COMPUTER SCIENCE   *Dec. 2017*

- 3.60 GPA

Projects

Open Austin   *Austin, Texas*
EVICTION HEARING SCRAPER   *May 2020*

- Open Data Initiative to create a data source for Austin, TX eviction cases to aid tenant action organizers during COVID-19 evictions.
- Infrastructure is also collecting historical eviction data for The Eviction Lab at Princeton University.
- Optimized for streaming workloads as bulk datasets can exhaust single machine memory limits.

Personal   *Remote, Earth*
SOCKGIT   *Apr. 2020*

- Rust daemon that simplifies manually creating and mirroring personal Git repositories with read-only access on any machine.
- Systemd service running on x86 and ARM instruction sets.