

Gabriel Mousa

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Experience

Software Engineer II

DoorDash — Seattle, Washington | March 2026 – Present

- Productionizing in an extremely fast-paced environment developing gifting solutions on the New Bets team for delivering orders, scaling from 5K to 14M in event traffic. Including unique scaling solutions and order limiting systems to handle burst traffic and multiple simultaneous campaigns for vendors.
- Developed and distributed from 0 → 1 custom tooling to manage merchant campaigns with live configuration updates, order tracking, and debugging capabilities. Handling 10,000+ live orders, sensitive PII, and cross-team order tracing.

Software Engineer II

Microsoft — Seattle, Washington | October 2023 – March 2026

- Architected distributed systems to account for large-scale token distribution for authentication and authorization of over 5M+ machines per month. This included unique request routing and scaling solutions to load balance traffic from 4 Azure services across 9 regions with custom caching and networking solutions.
- Synchronized logs and metrics for service performance data at billions of requests/month scale and across 7 Azure services improving end-to-end traffic flow tracking. Thus bringing incident resolution time down by 60% on average and allowing for improvements to service quality by +20% and up to +60% depending on the service, over the period of 6 months.
- 0 to 1 product development for infrastructure buildout automation which leverages MCP Client and Servers, CI/CD pipelines, CosmosDB thread tracking, Ev2, and Kubernetes workers. Automating infrastructure rollout to bring new region rollout times down from ~2 months to ~2 weeks per region.
- Designed horizontal autoscaling for message processing in 9 regions for customer load overloads with automated software deployments to handle scale of 1M+ customers per region.

Software Engineer

Dignitas Technologies — Orlando, Florida | November 2020 – September 2023

- Developed SDKs for C, C++, Java, and Python for users to interact with Dignitas simulation software. Working low-level on compilers and building systems to support 6 releases across 3 Linux distros and Windows.
- Introduced API integrations for 15+ endpoints to handle customer traffic with rate limiting and auth/authz.

Skills

Languages: Python, Typescript, Javascript, Golang, C++, C#/.NET, Java

Frameworks and Packages: Pytorch, Scikit-learn, React, Semantic Kernel, Pandas, NumPy, FastMCP, Python Notebooks

Infrastructure: Kubernetes, Docker, Azure, Azure DevOps, GCP, AWS, Ev2

Research Areas: Mechanistic Interpretability, CoT Faithfulness, Sycophancy Evaluation, AI Alignment

Projects & Other Experiences

Pancake — Parallel Agent manager

<https://github.com/gabe-mousa/pancake>

- Built a parallel agent manager for orchestrating multiple agent chat and Claude Code sessions. Allows multi-agent communication, shared memory, and different auth methods for user environments. Distributed across different streams with multiple users.

Apolien — AI Safety Evaluation Library for Python

<https://github.com/gabe-mousa/Apolien>

- Implemented post-hoc Chain-of-Thought faithfulness and sycophancy evaluation techniques based SOTA techniques in attribution graphs, circuit tracing, reward tampering, and specification gaming.

BlueDot Impact — Technical AI Safety Fellow

Participated as a fellow for BlueDot Impact's Technical AI Safety course

- Studied dangers of AI, modern research techniques for building defences, assessing harm, and minimizing risk within AI models.

Education

University of Central Florida — Orlando, FL

B.S. in Computer Science

Relevant Coursework: Machine Learning, Matrices and Linear Algebra, Advanced Statistics