

ALMAS PERNESHEV

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EDUCATION

Bachelor of Science in Computer Science

Cal Poly SLO, Presidential Honor, GPA ~3.7, 2025

SKILLS

Languages: C, C++, Java, Python, JavaScript, TypeScript, Assembly
Storages: MySQL, PostgreSQL, MongoDB, SQLite3, Redis/MemCached
Frameworks: FastAPI, Node.js, Django, Next.js, React, Spring Boot, D3.js, PyTorch
Infra & Cloud: AWS S3/IAM/EC2/Lambda, Nginx, Kafka, RabbitMQ, Azure, Firebase, Git, Terraform, Grafana, Docker, k8s
Coursework: Assembly Programming, Advanced Java, Data Structures and Algorithms, Object Oriented Programming, Database Systems, Design and Analysis of Algorithms, Systems Programming, Computer Architecture, Theory of Computation, Software Engineering I, Cybersecurity, Programming Languages, Operating Systems, Dynamic Web Development, Distributed Computing, Artificial Intelligence, Deep Learning, Scientific & Information Visualization, Privacy & Security in Machine Learning

EXPERIENCE

Lead Software Engineer *RazeMath, 1/2026 – 4/2026*

As a lead engineer, I managed a team of 5 engineers, reviewing Pull Requests, providing actionable code feedback, and planning sprints to keep delivery on schedule. Owned the development and monitoring of infrastructure and its observability to maintain the system's availability, and contributed to key product decisions alongside leadership.

Full Stack Engineer *RazeMath, 6/2025 – 12/2025*

As a full-stack engineer at a start-up, I developed a next-generation AI tutoring service to integrate with universities across California, where I was responsible for setting up CI/CD infrastructure, integrating real-time math rendering, redesigning the database schema, and integrating a subscription-based payment system using **Django REST, TypeScript, Next.js, Zustand, Firebase, Supabase, Azure, Prometheus, Grafana, and Stripe.**

Tutor: Computer Science and Mathematics *Cal Poly SLO, Fall 2022 – Spring 2025*

Tutored over **2000 students** on courses: Calculus I - IV, Linear Algebra, Discrete Math, Intro to Programming in C/Java/Python, Data Structures and Algorithms, Theory of Computation, Database Systems, Distributed Computing, Object Oriented Design, Design & Analysis of Algorithms, Systems Programming, Cybersecurity, and Software Engineering.

Data Annotator *Outlier, 10/2023 – 05/2025*

Evaluated LLM-generated code responses across multiple programming languages, queries, and frameworks. Authored detailed suggestions and fixed invalid generated code responses to enhance the quality of the LLM-generated code.

Teacher Assistant and SI Leader Roles

- **ISA: Theory of Computation (CSC 445)** *Cal Poly SLO, Fall 2024*
- **SI Leader: Programming in C/C++ (CS50/CS52)** *Santa Monica College, Spring 2022*
- **SI Leader: Multivariable Calculus (MATH 11)** *Santa Monica College, Spring 2020 – 2022*

Conducted supplemental/exam preparation sessions, office hours, and assisted with grading **+1000 students**

SAT Math Instructor *Grantly, 9/2021 – 2/2022*

I led SAT Math preparation sessions for **4 groups of 5-10 students**. Developed a structured syllabus, study materials, session agendas, and mock exams to simulate real test conditions. Achievements: My students averaged 695/800, 174 points above the global average, in 2022. Personally scored 780/800 in Math, ranking in the **top 1% worldwide** in 2017.

PROJECTS

[Personal Project] polyPlace: *JavaScript, Python, React, NodeJS, Postgres, Pub/Sub, JWT, Websockets, Azure, CI/CD, Redis*

Architected and built a real-time multiplayer art game as 3 microservices for user management, client interactivity, and WebSocket gameplay using an event-sourcing and pub/sub design to keep WebSocket state consistent across clients. Implemented JWT-authenticated, rate-limited sliding window APIs and a 1000x1000 pixel canvas with zooming, panning, and selection.

[Unpublished Paper] ML Privacy Research: *Python, PyTorch, CNN, Scikit-Learn, MIA, SSD*

Investigated privacy preservation in machine unlearning by evaluating Selective Synaptic Dampening against Membership Inference Attacks on Transfer-Learned VGG16. Demonstrated the privacy efficiency of SSD against the fully retrained model on multiple parameter selections of SSD. Advised by Dr. Phoenix (Dongfeng) Fang.

[Open-Source] Potion Game: *TypeScript, Ably, Supabase (Postgres), SQLite3, CI/CD, Docker, Terraform, Prometheus*

Contributed to **11 Pull Requests** in an open-source **event-driven multiplayer real-time game** of Potions, where I integrated metrics visualization using **Prometheus** and **Grafana**, implemented a new feature of expanded inventory, added keyboard interaction listeners, and contributed to end-to-end/unit tests.