ALMAS PERNESHEV

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EDUCATION

Santa Monica College — STEM Scholars
California Polytechnic State University, San Luis Obispo — *President's Honor, June 2025*
Bachelor of Science, Computer Science — *Cum Laude, GPA ~3.7*

COURSEWORKS & SKILLS

Coursework: Programming in Java/C/C++/Assembly, Advanced Java, Data Structures and Algorithms, OOP and Design, 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, Machine Learning in Cybersecurity, Scientific & Information Visualization

Languages: C/C++, Java, Python, Assembly (RISK-V/x86), JavaScript, TypeScript, SML

Storages: MySQL, PostgreSQL, MongoDB, SQLite, Parquet, Supabase, SqlAlchemy, Firebase, Redis, Duck DB

Frameworks: Flask, Django, Fast API, Node.js, Next.js, React, Spring Boot, D3.js, Vega-Lite, PyTorch, Spark

Infra & Cloud: AWS S3/IAM, Linux/Unix, Nginx, Azure, Firebase, Git/GitHub, Terraform, Grafana, Docker, k8s

Tests: Playwright, Cypress, Jest, PyTest

EXPERIENCE

Full Stack Engineer — *RazeMath, 6/ 2025 – Present*

As a co-lead full-stack engineer at a start-up, I've developed a next-generation AI tutoring service to integrate with universities across California, where I was responsible for enforcing engineering standards across the team, reviewing PRs, setting up CI/CD infrastructure, integrating a real-time math rendering, shifting and redesigning database schema from Non-SQL to Relational in Postgres, and integrating subscription based payment system using **TypeScript, Next.js, Django REST, Zustand, Firebase, Supabase, Azure, Prometheues, Grafana, Terraform**

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

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

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

Tested LLM-generated code responses across multiple programming languages, queries, and frameworks. Authored detailed suggestions and fixed invalid code responses to enhance the performance and security of 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 **World's Top 1%** in 2017.

PROJECTS

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

Contributed to **9 Pull Requests** in 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 end-to-end/unit tests.

[Personal Project] PolyPlace: React, NodeJs, Supabase (Postgres), Pub/Sub, JWT, Websockets, Azure, CI/CD

Designed and delivered a real-time, multiplayer online game of art using event-sourcing and pub/sub architectures for WebSocket servers. Implemented an interactive 1000x1000 pixel canvas with smooth panning/zooming.

[Unpublished Paper] ML Privacy Research: *PyTorch, CNN, MIA, SSD*

Investigated a privacy preservation in machine unlearning by evaluating Selective Synaptic Dampening against Membership. Inference Attacks on transfer-learned VGG16. Demonstrated privacy efficiency of SSD against the fully retrained model.