

ALMAS PERNESHEV

apervmm@gmail.com <https://github.com/apervmm> <https://www.linkedin.com/in/almas-perneshev> <https://almasperneshev.com/>

EDUCATION

Bachelor of Science in Computer Science

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

SKILLS

Languages: C, C++, Python, JavaScript, TypeScript, Java, Assembly
Storages: MySQL, PostgreSQL, MongoDB, SQLite3, Redis, Pinecone
Frameworks: FastAPI, Django, Node.js, Next.js, React, Spring Boot, D3.js, PyTorch, LangChain
Infra & Cloud: AWS S3/IAM/EC2/Lambda, Nginx, Azure, Git, RabbitMQ, Terraform, Prometheus, Grafana, Docker, k8s, LangSmith
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 lead engineer, I managed a team of 5 engineers, reviewed pull requests, provided actionable code feedback, and planned sprints to keep delivery on schedule. Owned infrastructure development and monitoring, including observability, to maintain system 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, designing a RAG pipeline, and integrating a subscription-based payment system using **Python, Django REST, TypeScript, Next.js, Zustand, Firestore, Supabase, Redis, Azure, Prometheus, Grafana, and Stripe.**

Tutor: Computer Science and Mathematics *Cal Poly SLO, Fall 2022 – Spring 2025*
Tutored over **2000 students** in 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.

Teaching 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

[Distributed Game] PolyPlace: *FastAPI, SQLAlchemy, React, Postgres, JWT, CI/CD, Redis, Docker, RestAPI/WebSockets, Pub/Sub, Azure, AWS*
Architected and built a real-time multiplayer art game as 3 microservices for user management, client interactivity, and WebSocket gameplay. Used Redis for a Pub/Sub design to scale WebSocket servers, cache-aside for hot canvas reloading, and rate-limited sliding-window APIs. Handled JWT authentication and implemented client interaction on a 1000x1000 pixel canvas with zooming, panning, and selection.

[AI Security Research] Machine Learning Privacy Research: *Python, PyTorch, Scikit-Learn, Membership Inference Attack, SSD, CNN*
Investigated data privacy preservation in CNN by evaluating **machine unlearning** algorithms such as 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.**

[Agentic System] Deterministic LLM Agent: *Python, JavaScript, Playwright, Pydantic, Safety Policy, Anthropic API*
Designed a system for agents in the loop to generate versioned and parametrized artifacts for **Deterministic Replications**, which removes the token cost of LLM runs. Added a policy layer enforcing domain/route/action allowlists, recursive PII redaction and masking, and 'human-in-the-loop' escalations for both discovery and replay runs.