Kourosh Salahi

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EDUCATION

UC Berkeley - Management, Entrepreneurship, & Technology (M.E.T.) Program Graduating 2027

Double Major: B.S. Electrical Engineering & Computer Science (EECS), B.S. Business Administration GPA: 3.89

Distinctions: Selected as one of ~50 students to be part of the M.E.T. Program (<2% acceptance rate); Dean's List (x4)

Relevant Coursework: Machine Learning, Deep Neural Networks, Computer Vision, Robotics, Data Structures, Efficient Algorithms, Machine Structures, Probability Theory, Discrete Math, Signal Processing and Systems, Circuit Design

PROFESSIONAL EXPERIENCE

- **Google Inc.**, *Software Engineering Contractor* *September 2025 - Present*
  - Developing CLI testing tool to capture and replay PostgreSQL traffic for performance benchmarking.
  - Implementing workload capture, concurrency preservation, and variable-speed replay modules in Golang/Python.
  - Automating summary report generation after replays to benchmark transactions per second and query latency.
- **GoodFin Inc. (YC W22)**, *Software Engineering Intern* *May 2024 - August 2024*
  - Created an administrator dashboard with AWS (DynamoDB, Amplify, Lambda), React, and Node to manage user investments, company metrics, and products; backed by serverless REST APIs and S3-based file handling.
  - Reduced engineering intervention time and shortened investment management tasks from **hours to seconds**.
  - Built SMS marketing subscription flow with Klaviyo and DynamoDB, increasing customer engagement **by 27%**.
  - Built automated premium-user welcome emails with Stripe webhooks and IAM data, boosting retention **by 11%**.
- **Blockhead Boosters Inc.**, *Robotics Software and Hardware Engineer* *December 2020 - May 2023*
  - Solved for robot position in real time using odometry data and developed autonomous robot path planning.
  - Developed L.E.D. communication system, doubling driver efficiency and reaching the **FRC World Championship**.
  - Created robot claw subsystems using SolidWorks, and machined robot parts using a CNC router and mill.

RESEARCH AND TEACHING

- **Berkeley AI Research, Prof. Trevor Darrell Group**, *Machine Learning Researcher* *July 2025 - Present*
  - Conducting research on diffusion-based generative computer vision models for 6-DOF robotic perception and control.
  - Optimized diffusion training pipeline by replacing Diffusion Transformer (DiT) loss with Representation Alignment (REPA) loss and Scalable Interpolant Transformer (SiT) loss, achieving a **30%** performance improvement.
- **UC Berkeley EECS Department**, *Undergraduate Course Staff* *August 2025 - Present*
  - Served as course staff for Berkeley flagship Machine Learning course, CS189; enhanced learning for **500+ students**.

PROJECTS AND EXTRACURRICULARS

- **LLM Security and Alignment:** Developed latent space manipulation and ablation methods to augment specialist LLMs without full fine-tuning; revealed vulnerabilities by ablating refusal vectors to bypass safeguards.
- **AI Math Note Assistant:** Built a web tool that converts handwritten math on PDFs into LaTeX with **94%** accuracy (Gemini + Groq APIs), reducing conversion time by **98%** and adding AI tutoring for step-by-step problem-solving support.
- **AI Sign Language and Emotion Interpreter:** Engineered a real-time AI tool with a web-based user interface that interprets ASL with emotional context to enhance communication for the deaf community. Integrated Google MediaPipe for 3D hand and face tracking, Gemini for ASL decoding, and Hume AI to achieve empathetic, accurate translations.
- **Automatic Diabetic Insulin Pump:** Programmed in Python using Dexcom API to track and dynamically control user's blood sugar with an automated insulin pump. Predicted fluctuations in blood glucose levels would trigger a motor to administer insulin and/or glucagon. Won **1st place** in local hackathon.
- **Automated Client Outreach Service:** Built a Selenium-based system to identify and collect Instagram profiles matching preset criteria; automated personalized outreach to support diabetic fundraising initiatives.

ADDITIONAL INFORMATION

- **Programming Languages:** Python, Java, JavaScript, HTML, CSS, C++, C, SQL, Go.
- **Technologies:** PyTorch, Numpy, Pandas, OpenCV, ROS2, React, AWS, Selenium, MediaPipe, Node.js, PostgreSQL.
- **Leadership:** Eta Kappa Nu Honor Society Industry Relations Officer, Undergraduate Real Estate Club Analyst.
- **Languages:** Trilingual - Fluent in English and Farsi, proficient in Spanish.
- **Interests:** Second Degree Black Belt in TaeKwonDo, Judo Beginner, Golf, Guitar, Fragrance Collector.