

# KAMRAN MOSTAFAVI

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## PROFESSIONAL SUMMARY

Technology executive and AI innovator with 25+ years of experience spanning hardware engineering, program management, and AI/ML development. Founder of Chatrobotics LLC, an AI-powered educational platform leveraging NLP, machine learning, and conversational AI. Master's degree in Computer Science (ML/AI) from Georgia Tech. Teaching Assistant for Deep Learning at Georgia Tech. Proven track record leading cross-functional teams, managing \$10M+ budgets, and delivering complex technology products from concept to production. Expertise in Python, ML frameworks (PyTorch, TensorFlow), full-stack development, and cloud platforms (AWS, Azure). Seeking opportunities to drive AI innovation, lead technical teams, or contribute deep technical expertise in machine learning, AI applications, or technology leadership roles.

## CORE COMPETENCIES

<b>AI/ML Development</b> <ul style="list-style-type: none"><li>• Deep Learning &amp; NLP</li><li>• PyTorch, TensorFlow</li><li>• Transformer Models</li><li>• Computer Vision</li><li>• Reinforcement Learning</li></ul>	<b>Technical Leadership</b> <ul style="list-style-type: none"><li>• Program Management</li><li>• Engineering Management</li><li>• Product Development</li><li>• Cross-functional Teams</li><li>• PMP Certified</li></ul>	<b>Software Engineering</b> <ul style="list-style-type: none"><li>• Python, Java, C++, PHP</li><li>• Full-Stack Development</li><li>• AWS, Azure, GCP</li><li>• MySQL, Database Design</li><li>• SaaS Platforms</li></ul>
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## PROFESSIONAL EXPERIENCE

### Founder & CEO | Chatrobotics LLC | Los Gatos, CA

March 2023 – Present

Founded and lead an AI-powered educational technology company (chat-robotics.com) that delivers intelligent chatbots, automated flashcard generation, transcription services, and exam creation tools to enhance learning and productivity.

- Architect and develop full-stack AI platform using Python, PHP/MySQL, JavaScript, with AWS S3 integration for scalable media storage and processing
- Implement advanced NLP features including PDF-to-presentation conversion using agentic AI approaches, LaTeX equation rendering in flashcards, and intelligent content extraction
- Build comprehensive audio caching systems with text-to-speech integration for hands-free study modes and accessibility
- Develop marketplace infrastructure with Stripe Connect integration for creator payouts and affiliate marketing systems
- Create Anki flashcard import/export functionality and sophisticated user preference management systems
- Design and implement AI-powered features for automated code plagiarism detection in student submissions

### Teaching Assistant, Deep Learning (CS7643) | Georgia Institute of Technology

August 2021 – Present

- Develop and manage course content for graduate-level Deep Learning course, covering neural networks, CNNs, RNNs, transformers, and advanced architectures
- Grade complex assignments on transformer models, ROI pooling algorithms, and PyTorch implementations
- Mentor students on ML concepts, provide technical guidance on projects, and evaluate understanding of cutting-edge deep learning techniques

### Founder & Engineering Lead | Apptify Webservices Inc. | Campbell, CA

July 2012 – July 2017

- Designed and implemented SaaS platforms for small and medium-sized businesses using PHP/MySQL/JavaScript
- Developed web applications for medical/dental professionals, finance, education, and project management
- Provided engineering consulting services including test automation and software development

### **Senior Engineering Program Manager | Aoptix Technologies | Campbell, CA**

September 2011 – June 2012

- Led program management for Hybrid RF & Optical 2Gbps Intellimax point-to-point wireless transceiver platform
- Managed cross-functional team of senior managers across hardware, software, mechanical, optical, and manufacturing operations
- Developed program schedules, estimated budgets and COGS, identified and mitigated program risks

### **Senior Engineering Program Manager / Engineering Manager | Juniper Networks | Sunnyvale, CA**

November 2000 – April 2009

- Managed complete product lifecycle (NPI and sustaining) for Juniper routing engines as hardware lead, ODM program manager, and sustaining engineering manager
- Charted technical roadmap for 5 generations of routing engines, including CPU, chipset, memory, HDD, and SSD evolution
- Led programs from concept to production as owner of schedule, cost, and scope for projects up to \$10M budget
- Managed ODM vendors (Kontron, Motorola, Accton) and technology partners (Intel, Broadcom, Freescale)
- Program Manager for Juniper Control System, 10x10 Gig Ethernet PIC, and routing protocol daemon features
- Led vendor selection, drafted SOWs and NRE agreements, and established ODM/OEM engagement processes

### **Netserver Firmware Architect / Project Leader | Hewlett Packard Company | Cupertino, CA**

1995 – 2000

- Led re-engineering of software development lifecycle and firmware architecture for NetServer division
- Project lead for Common BIOS group of 12 engineers delivering shared firmware services
- Led team of 5 engineers to deliver system software for enterprise and mid-range Intel-based servers
- Patent holder: Interrupt routing in servers (US Patent 6141703)

## **TECHNICAL PROJECTS & ML EXPERTISE**

- Applied supervised learning algorithms (Decision Trees, KNN, Neural Networks, SVM, Boosting, Bagging) to UCI datasets with hyperparameter tuning and model complexity analysis
- Built deep learning models for medical X-ray diagnosis and classification using CNNs with PyTorch on AWS EC2 GPU instances
- Implemented transformer encoder/decoder architecture for image caption generation using Flickr8 dataset
- Developed LSTM and transformer models from scratch for English-to-German translation without using built-in PyTorch models
- Applied reinforcement learning to stock trading and solved OpenAI Gym Lunar Lander problem with Q-learning
- Implemented Kalman filters, particle filters, SLAM algorithms, and Hidden Markov Models for robotics applications
- Utilized MapReduce, Hadoop, Hive, Spark, and Databricks for big data analysis and ML pipelines

## **EDUCATION**

### **Master of Science in Computer Science (Machine Learning & AI)**

Georgia Institute of Technology | 2017-2020

*Courses: Machine Learning, Deep Learning, Reinforcement Learning, AI, Robotics, Machine Learning for Trading, Big Data Health, Advanced Software Architecture, Compiler Design, Operating Systems, Graduate Algorithms*

### **Master of Engineering in Electrical Engineering**

Rensselaer Polytechnic Institute

## **Bachelor of Science in Electrical Engineering**

Boston University

### **CERTIFICATIONS & TRAINING**

- Project Management Professional (PMP) – Certified since 2010
- Natural Language Processing Nanodegree – Udacity (2022-2023)
- Data Structures – Coursera (2017)
- Algorithms on Graphs – Coursera (2017)

### **PATENTS & PUBLICATIONS**

**US Patent 6141703:** Interrupt Routing in Servers – Hewlett Packard Company