

# Amir Moazami

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## Senior Software & Machine Learning Engineer

### Deliver Market-Centric Solutions That Enhance Customer Engagement and Operational Efficiencies

Dynamic Senior Software and Machine Learning Engineer with proven track record of building high-impact, scalable solutions for complex business challenges. Expert in full-stack development, ML pipelines, and cloud infrastructure, driving operational efficiencies and enhancing customer experiences. Skilled in leading cross-functional teams, innovating with cutting-edge technologies, and establishing robust architectures. Entrepreneurial mindset with a history of founding and scaling startups, delivering market-driven products, and spearheading initiatives that resulted in double-digit growth in user engagement and revenue.

## Technical Skills

- **Programming, Scripting & Query Languages:** Python, JavaScript / TypeScript, PowerShell, SQL, C#
- **Frameworks & Architectures:** FastAPI, Django, Flask, LINQ, .NetCore, Pydantic Models, Micro Services Architecture, MVC, N-Tier, API Architecture, REST API
- **Web & Mobile Development:** React, Next.js, Angular, Ionic, HTML, CSS Machine Learning & Data Science, TensorFlow, Keras, PyTorch, Spark, Hadoop, Power-Bi, Tableau
- **Cloud Computing:** Azure, Google Cloud Platform (GCP)
- **Automation & Containerization:** Ansible, Microsoft Flow, Docker, Docker Compose, Kubernetes, Gitlab CI/CD, GitHub Actions, Azure DevOps, Slurm

## Work Experience

INTERDIGITAL, Los Altos, CA

### Senior Full Stack Developer & Machine Learning Engineer

2021 - 2024

Played pivotal role within Software Development Life Cycle by fulfilling multiple roles ranging from a main back-end development remit to frontend development, as well as DevOps and ML Ops, delivering clean and scalable code in Python and JavaScript / React.

- Developed Trident's frontend architecture using React and Next.js, reducing load times 40% and increasing user engagement 25%. Integrated a new state management system, enabling dynamic UI updates, and redesigned the UI to improve responsiveness, resulting in a substantial increase in overall user satisfaction.
- Designed and deployed robust backend APIs using FastAPI, implementing WebSocket communications and Redis caching, which reduced server response times 50% and significantly enhanced API performance during peak usage periods.
- Spearheaded creation of comprehensive CI/CD pipelines using GitLab CI and Ansible, reducing deployment times from 20 minutes to 5 minutes and decreasing manual intervention 80%, ensuring consistent code quality and significantly accelerating delivery cycles.
- Architected scalable microservices framework, integrating multiple Azure services, including App Gateway, Azure Container Registry, and CosmosDB, driving significant increase in system scalability and lowering operational costs by optimizing cloud resource management.
- Built and automated MLOps pipelines utilizing MLflow, facilitating seamless model deployment and versioning for Research Teams, which improved model iteration speeds and decreased production model deployment times from weeks to days, greatly accelerating project timelines and enhancing team productivity.
- Enhanced system reliability and performance by implementing comprehensive monitoring solutions with Grafana and Prometheus, achieving significant increase in data processing capacity and a more responsive troubleshooting process through advanced real-time monitoring capabilities.

- Reduced resource wastage 50% by implementing a Slurm-based grid monitoring tool, which identified inefficiencies in GPU utilization for each user. Developed warning and action-based system to optimize resource allocation, effectively sharing compute resources among all users and improving overall system efficiency.
- Developed Trident as a holistic application system, integrating tools like Jupyter Notebook, TensorBoard, Aim Experiment Tracking, and Matlab with Slurm, improving resource management and usability, resulting in a marked increase in user adoption and satisfaction.

**INTERDIGITAL**, Los Altos, CA

**Software Engineer - Full Stack** (DS&C IT Operations - Mobile App Development)

**2019 - 2021**

Designed, developed, tested, debugged, delivered, and supported numerous mobile apps using technologies like Ionic / Angular, Net Core, SQL, and Azure Cloud for Android, iOS, Windows, and web platforms. Collaborated with clients and stakeholders to establish software specifications, design features, manage project budgets, and adhere to agile frameworks throughout software development lifecycle.

- Developed and automated mobile app for refinery engineers using Ansible, Azure Cloud, and CAD technologies, leading team of 4 software engineers and achieving annual savings of over 1.5K hours and \$270K for the Richmond refinery business units.
- Led Chevron and Texaco apps' support team, coordinating with PayPal and Stuzo during development, deployment, and maintenance phases, adhering to 100% of Service Level Agreements, enhancing user experience for over 500K users, and contributing to \$2.5M in revenue.
- Utilized Ansible and Azure DevOps frameworks to create automation deployment pipelines and develop Ansible playbooks, reducing deployment windows 25%, increasing system accuracy and efficiency, and maximizing uptime.
- Developed customized back-end system featuring REST API and front-end admin portal for Terminal Checking-V2, using C#, LINQ, resulting in a 300% increase in app usage and uptake.
- Developed customized Starlim mobile app for refinery laboratory technicians, featuring a multi-layer API using C#, LINQ, and CRUD operations on a REST API, automating lab results and work review processes.

**INTERDIGITAL**, Los Altos, CA

**Mentor, Data Science**

**2020**

Facilitated weekly 1-on-1 data science and machine learning training, coaching colleagues on problem solving, tracking progress against specific parameters, and managing numerous responsibilities within 8-hour shifts on tight deadlines.

**INTERDIGITAL**, Los Altos, CA

**Data Engineer & IT Management Analyst**

**2017 - 2019**

Developed and implemented network security solutions, load balancing, and custom jobs for Documentum and D2 servers at MCPIM to enhance system performance. Managed 13 environments of the GDS / D2 system across 4 geolocations to ensure stable operations for a mission-critical application.

- Built Power BI visualization dashboards, enabling effective performance monitoring for a 50-member operations team.

**SACRAMENTO STATE UNIVERSITY**, Sacramento, CA

**Teacher Assistant**

**2017**

## Entrepreneurial Experience

**VIEW360.AI**, San Ramon, CA

**Founder & CEO**

**2023 - Present**

Co-founded and developed View360.ai platform, incorporating Azure ML and custom models to facilitate personal AI interactions with multimedia content, while handling front-end and back-end development, including machine learning and modeling in collaboration with a co-founder.

- Developed front end using Next.js and React, integrating responsive layouts and interactive elements, as well as server-side rendering and state management, establishing a user-friendly interface that supported dynamic multimedia interactions and enhanced system performance.

- Engineered back end with FastAPI, integrating async programming and dependency injection and running on Azure AKS, utilizing Docker for containerization, which ensured a robust deployment.
- Implemented advanced AI technologies, specifically RAG and ASR, alongside neural network-based machine learning, continuously enhancing platform's audio and video analysis capabilities with TensorFlow, PyTorch and Open AI API, incorporating deep learning and natural language processing (NLP).

**TROFI**, Sacramento, CA

### Founder & CEO

**2021**

Led mobile application startup project to enhance peer-to-peer home kitchen connections, utilizing Angular and Ionic frameworks with Capacitor, and leveraging Firebase along with a .Net Core 5 backend to create a decentralized marketplace mobile app for homemade food, incorporating delivery systems and kitchens for home chefs.

## Education

- **Master of Science (MS)**, Machine Learning and Data Science, University of California, Berkeley, Berkeley, CA, 2024
- **Bachelor of Science (BS)**, Electrical Engineering, Electronics and Power Generation, California State University, Sacramento, CA

## Certifications

- Certified Scrum Master (CSM), Scrum Alliance (Credential ID 1094441), 2019
- Certification as an Engineer-in-Training (EIT), Electrical and Computer Engineering, 2017

## Academic Experience

- NLP Multi-Document Summarization
  - Developed and implemented NLP training methods using technologies like the T5 model, PyTorch, TensorFlow, and RAG, resulting in publication of a research paper on abstractive and extractive methods.
- House Pricing Prediction
  - Implemented neural network models using Python, TensorFlow, CUDA, and multi-layer neural networks on Zillow data to predict house prices, specifically employing a feedforward model approach.
- Flight Delay Prediction
  - Employed Hadoop, Spark, and parallelization techniques with Python, logistic regression, and neural networks, including multi-layer neural networks, gradient boosted decision trees, and Random Forest Models, to predict 2 hours in advance flight delays on datasets aggregating over 50M rows of data, utilizing F1 score to evaluate model performance and employing time series cross-validation and manually designed early stopping techniques to optimize results.