

AMIN PARVA

AI/ML and Software Lead

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PROFESSIONAL SUMMARY

Visionary AI/ML and Software Lead with 15+ years of technical leadership experience specializing in machine learning, data science, and full-stack development. Currently leading athlete performance analytics and predictive modeling initiatives at Athlete Management Technologies, where I design and implement end-to-end ML pipelines using **PyTorch, TensorFlow, and TensorFlow Lite** for real-time sensor data processing. **Expert in AI agent integration with Cursor IDE**, building Flask APIs for model deployment, and developing mobile applications that capture accelerometer and gyroscope sensor data for motion detection and movement analysis. **Specialized in modern DevOps practices** including GitHub Actions CI/CD pipelines, Docker containerization, and AWS cloud deployment (ECR, App Runner). Proven track record of architecting enterprise-scale systems across healthcare, sports technology, and enterprise software domains while mentoring technical teams and driving innovation through cutting-edge AI methodologies.

TECHNICAL SKILLS

AI/ML & Data Science	PyTorch, TensorFlow, TensorFlow Lite, Scikit-learn, Pandas, NumPy, SciPy, Matplotlib, Seaborn, Supervised/Unsupervised Learning, Pattern Recognition, Data Collection, Model Training, Predictive Analytics, Neural Networks, Deep Learning
Programming Languages	Python, C#, C++, Java, VB.NET, JavaScript, TypeScript, HTML5, CSS3, SASS, SQL, MUMPS
Mobile & Web Development	Flask APIs, React, Next.js, Angular.js, Backbone.js, Django, Flutter, .NET 9, ASP.NET MVC, Web Forms, API Development, SPA Architecture, Mobile App Development
Cloud & DevOps	AWS (SageMaker, App Runner, EC2, S3, ECR), Azure, Docker, GitHub Actions, CI/CD Pipelines, Cloud Computing, Containerization, Model Deployment
Sensors & IoT	Accelerometer, Gyroscope, Motion Detection, Sensor Data Processing, Real-time Data Collection, Movement Analysis, IoT Integration, Time Series Analysis
Databases & Integration	Oracle, SQL Server, MySQL, SQLite3, Snowflake, Intersystems Cache, HL7, Healthcare Systems, Clinical Analyzers, Middleware Integration, Sitecore CMS, DreamFactory API, JSON, RESTful APIs
AI Tools & Leadership	Cursor AI, AI Agent Integration, AWS Bedrock, LangChain, MLOps, Technical Leadership, Strategic Planning, Cross-functional Team Management, Agile/Scrum Master, Technical Mentoring, AI-Powered Development Methodologies

PROFESSIONAL EXPERIENCE

AI/ML and Software Lead | Athlete Management Technologies | Feb 2025 - Present

AI/ML Engineering Lead specializing in athlete performance analytics and predictive modeling

Key Projects & Responsibilities:

Project 1: Coach App Enhancement (Flutter Development)

- Developed and enhanced Flutter-based Coach App connecting FirePod sensors to end users

- Implemented real-time data streaming from accelerometer and gyroscope sensors to mobile interface
- Built responsive UI/UX for coaches to monitor athlete performance metrics in real-time
- Integrated with backend APIs for seamless data flow between sensors and mobile application
- **TensorFlow Lite Integration:** Consumed TensorFlow Lite models in Flutter app for offline inference, enabling real-time athletic movement detection without internet connectivity

Project 2: ML for Athletic Movement Detection (Primary Focus - 80% of workload)

- **Data Collection & Pattern Discovery:** Comprehensive data collection and pattern discovery for both supervised and unsupervised learning using Python libraries including PyTorch, TensorFlow, and Scikit-learn
- **Sensor Data Processing:** Specialized in processing real-time sensor data from accelerometer and gyroscope sensors for advanced motion detection and athletic performance analysis
- **Model Training & Development:** Training ML models to detect swings, throws, and athletic movements from gyroscope and accelerometer sensor data using deep learning frameworks
- **Model Deployment Architecture:** Building and designing applications for consuming TensorFlow and TensorFlow Lite models with Flask APIs and client applications
- **End-to-End ML Pipeline:** Designing and implementing complete end-to-end ML pipeline with AI agent assistance, gathering requirements from Product Owner and development team
- **DevOps & CI/CD Pipeline:** Creating comprehensive CI/CD pipeline with GitHub Actions and Docker containerization, pushing images to AWS ECR and building AWS App Runner services to serve ML models

Project 3: AI Agent for Internal Employee Support

- **AWS Bedrock AI Agent:** Built and deployed an intelligent AI agent using AWS Bedrock and LangChain framework to provide automated guidance and instruction to internal employees
- **Technical Troubleshooting Support:** Implemented advanced conversational AI capabilities with context-aware responses for technical issue resolution and employee guidance
- **Enterprise-Grade Security:** Ensured enterprise-grade security and compliance for internal AI agent deployment
- **AI Agent Integration:** Working extensively with AI agents in Cursor IDE to enhance development productivity and implement cutting-edge software methodologies

Additional Project: Athlete App Development

- Developed Athlete App for end users to access performance data and analytics
- Implemented user-friendly interface for athletes to view their performance metrics
- Integrated with ML models to provide personalized insights and recommendations

Cross-Project Technical Achievements:

- Led technical architecture decisions across all projects ensuring scalability and maintainability
- Implemented Agile/Scrum methodologies for project management and team coordination
- Mentored development team members and provided technical guidance on best practices
- Established coding standards and development workflows across all projects

Senior Technical Lead & Engineering Executive / Antech Diagnostics (Mars Inc.) / Oct 2015 - Nov 2024

Executive leadership of enterprise healthcare technology transformation and digital innovation initiatives

- Orchestrated digital transformation strategy, leading 15+ enterprise-scale projects serving 5,000+ healthcare clients and generating \$50M+ in revenue impact
- Evolved from Senior Software Engineer to Senior Technical Lead, establishing technical excellence standards and innovation frameworks across global engineering teams
- Led organizational change management initiatives during Mars acquisition, successfully integrating 200+ technical professionals and maintaining 99.9% system uptime
- Established Center of Excellence for AI/ML adoption in healthcare, mentoring 25+ technical leaders and implementing data-driven decision making culture
- Drove strategic technology partnerships and vendor management, reducing operational costs by 30% while improving system performance by 200%

- Presented technology roadmaps and innovation strategies to C-suite executives, securing \$15M+ in technology investment approvals

Technical Lead & Engineering Manager / Technijian / Jan 2015 - Oct 2015

Executive leadership of enterprise software architecture and global development team management

- Led strategic technology initiatives, successfully delivering 2 enterprise-scale projects worth \$5M+ in client value and establishing market leadership position
- Architected next-generation n-tier software platform for clientportal.technijian.com, serving 10,000+ enterprise users and improving operational efficiency by 150%
- Established comprehensive security and compliance framework, achieving SOC 2 certification and reducing security incidents by 100%
- Built and managed global development teams across India and US, implementing agile methodologies and establishing technical excellence standards
- Drove digital marketing transformation through SEO optimization, increasing web traffic by 300% and generating \$2M+ in new business opportunities
- Presented technology strategy to board members, securing approval for \$3M+ technology investment and expansion initiatives

Lead & Co-Founder / ParvaGroup / July 2008 - Nov 2014

Founding leadership of technology startup, driving innovation and market expansion

- Co-founded and scaled technology startup from concept to market leader, growing team from 2 to 12 professionals and achieving \$2M+ in annual revenue
- Led strategic market expansion, delivering 75+ enterprise web applications and establishing market dominance in regional technology sector
- Established comprehensive project management and quality assurance frameworks, achieving 100% client satisfaction and 98% on-time delivery rate
- Drove strategic partnerships and business development initiatives, securing long-term contracts with 25+ enterprise clients and generating \$5M+ in total contract value
- Built high-performance technical teams and established company culture focused on innovation, excellence, and client success
- Presented business strategy and growth plans to investors and stakeholders, securing \$500K+ in funding and strategic partnerships

SPECIALIZED EXPERTISE

Agile-to-AI Team Transformation

Expert in modernizing traditional agile development teams into AI agent-powered organizations.

Specialized in implementing cutting-edge software methodologies that integrate AI agents (like Cursor AI) into development workflows, resulting in:

- **150% increase in team productivity** through AI-assisted code generation and testing
- **90% reduction in manual data processing** via intelligent automation
- **Enhanced code quality and consistency** through AI-powered code review and optimization
- **Faster time-to-market** with AI-accelerated development cycles
- **Modern software architecture** designed for both traditional and ML/AI applications

Technical Leadership: Deep expertise in software architecture and design across both traditional enterprise systems and cutting-edge ML/AI platforms. Proven ability to bridge the gap between legacy systems and modern AI-powered development environments while maintaining technical excellence and team productivity.

CERTIFICATIONS

- Scrum Master | LinkedIn Learning | 2024

- Leadership Fundamentals | LinkedIn Learning | 2024
- Management in Organization | LinkedIn Learning | 2024
- Advanced C# | LinkedIn Learning | 2024

AWARDS

■ **Antech Tax Benefits Reward** for High Performance Employees | 2024

EDUCATION

Bachelor of Science in Electrical Engineering

Azad University, Bushehr, Iran | 2003 - 2008

ADDITIONAL INFORMATION

- Languages: English (Fluent), Persian (Native)
- Work Authorization: US Citizen
- Availability: Open to relocation and remote work
- Industry Experience: Healthcare Technology, Sports Analytics, Enterprise Software, AI/ML