Shahriar Hooshmand, Ph.D.

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SUMMARY

My work spans a wide range of areas in computational science and engineering, high-performance computing, AI/ML, and project lifecycle management with a focus on delivering customer-focused software products across diverse scientific disciplines by developing a full-stack, end-to-end AI software ecosystem. Currently, I am focusing on building generative AI-powered platforms to enhance workforce productivity in enterprise organizations, combining strategic leadership with hands-on technical execution.

EXPERIENCE

HP (Principal Data Scientist and Lead Architect) 2023-present

· Leading strategic data initiatives, leveraging Large Language Models **(LLMs)** in innovative, customer-centric SaaS products.
· Serving as a technical lead, managing multidisciplinary teams in the development and execution of **AI-driven software** and **product** innovations, ensuring program alignment with strategic objectives through planning, execution and post-launch support.
· Orchestrated the adaptation of LLMs into enterprise solutions, including a **Virtual Assistant Chatbot**, coordinating engineering and product teams to achieve high-efficiency outcomes.
· Pioneered Smart Insight Generation platform using LLMs, delivering actionable business intelligence and market foresight.
· Led end-to-end development of data science-focused SaaS offerings, aligning with customer needs for improved user-end experience.
· Spearheaded cross-functional teams in the agile development of AI-driven products, fostering collaboration between engineering, product management, and data science to meet critical deadlines and deliverables.
· Implemented best practices for software development and product lifecycle management, ensuring high-quality deliverables and efficient, scalable solutions.

HP (Senior Data-AI/ML Scientist) 2022-2023

· Delivered new data science/machine learning insights for the HP Workforce Experience platform.
· **Intelligent Fleet Explorer**: Prototyped **generative AI** pipeline system for generating intelligent insights through natural language and visualization, utilizing structured big corporate **telemetry datasets**.
· **Support Automation System**: Prototyped **LLM** and **GPT** fine-tuned on the corporate domain-specific knowledge base to automate support system, insights generation and active remediation purely data-driven and personalized on the customer device systems.
· **Panacea**: Led the development of **NLP**-based support automation system to identify and resolve customer issues (proactive remediation).
· **Personas Identification and Device Recommendation**: Prototyped and productionized the personas identification across commercial customers using unsupervised ML and recommended best devices and accessories to the users.
· **AI-Simulator Project**: Prototyped the ensemble of predictive ML models to quantify and optimize the device performance based on hardware and software features.

General Motors (Artificial Intelligence/ Machine Learning Scientist) 2021-2022

· Pioneered development cycles for autonomous driving systems, working closely with corporate R&D to address industry challenges.
· Complex high-volume data manipulation to identify patterns and trends, employing advanced predictive modeling on time series data.
· Constructed advanced data science products, utilizing Python, SQL, and Spark for big data extraction and consumption by software teams.
· Specialized in processing highly imbalanced data, contributing significantly to algorithmic models for autonomous driving systems.

SKILLS AND INTEREST AREA

· Experienced in building scalable high-performance solutions and predictive models using advanced AI/ML algorithms.
· Skilled in full-stack end-to-end pipeline development from initial prototyping to production.
· **Programming:** Python, PySpark, SQL, Scikit-learn, PyCaret, PyTorch, TensorFlow, MLFlow, C/C++, MATLAB, NVIDIA CUDA.
· **Cloud Platforms:** Practical expertise in AWS (EC2, EMR, SageMaker, QuickSight, Bedrock), Kubernetes, and various Azure services.
· **Project Management:** Agile, Scrum, Cross-functional Leadership.
· **Program Management:** Leading technical teams, managing software development lifecycle, delivering AI/ML products at-scale.

EDUCATION

University of California, Berkeley Berkeley, CA
· Postdoctoral Scholar 2019 - 2021

The Ohio State University Columbus, OH
· **Ph.D., M.Sc.** in Materials Science and Engineering (Concentration: Computational Science), [GPA: 3.9/4.0] 2014 - 2019
· **Graduate Minor** in Computer Science and Engineering (Concentration: AI/ML in Science), [GPA: 4.0/4.0] 2017 - 2019

Sharif University of Technology Tehran, Iran
· **B.Sc.** in Engineering 2010 - 2014