Shahriar Hooshmand, Ph.D.

Cell: 470-535-4755| Email: shahriarhoushmand@gmail.com | Website: https://www.linkedin.com/in/shahriarhooshmand/
Address: 4038 Willamette Ave, San Diego, CA 92117 | Residency status: U.S. Permanent Resident

SUMMARY

My work spans a wide range of areas in computational science and engineering, high-performance computing, and AI/ML, with a particular 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 focused on building a generative AI-powered platform that enables enterprise organizations to unleash the full potential of their workforce and optimize the use of their workplace.

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.
- Acted as a technical lead, managing a multidisciplinary team of scientists in the development and execution of **AI-driven software** and **product** innovations, ensuring projects align with strategic business objectives.
- Orchestrated the adaptation of LLMs into enterprise solutions, significantly enhancing response efficiency by a **Virtual Assistant Chatbot**.
- 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

- Delivering new data science/machine learning insights for the HP TechPulse 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**: Prototyped and productionized **NLP**-based support automation system to identify and classify customer problems, interact with the user, and perform solutions on their devices.
- **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 solutions and predictive models using advanced AI/ML algorithms.
- Skilled in full-stack end-to-end pipeline development from initial prototyping to production.
- Proficient in GPU-accelerated analytics and high-performance computing methodologies.
- **Programming Tools:** Python, PySpark, SQL, Scikit-learn, PyCaret, PyTorch, TensorFlow, MLFlow, C/C++, MATLAB, NVIDIA CUDA-based and GPU-based computing.
- **Cloud Platforms:** Practical expertise in AWS (EC2, EMR, SageMaker, QuickSight, Bedrock), Kubernetes, and various Azure services.

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