MOHAN VAMSI ADLURU

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EDUCATION

Zurich University of Applied Sciences(ZHAW)   Zurich, Switzerland
Master's in Applied Computational Life Sciences; GPA: 4.55/6   *Sep 2024 – Present*
- Built an NLP pipeline to process Medline XML and ChEBI ontology data, using SpaCy for NER and Whoosh for fast entity resolution which improved chemical entity recognition to support clinical research and pharmaceutical applications.
- Fine-tuned a Mistral-7B model (via Unsloth) on the NewsKG21 dataset to extract subject–predicate–object triples from news text. Designed Alpaca-style prompts, applied LoRA-based adaptation, used SpaCy for subject parsing, and evaluated performance on a HPC Cluster.
- Developed a genetic algorithm model to optimize insulin dosage, meal intake, and exercise timing for Type 2 diabetes patients, minimizing glucose deviation from the target level (100 mg/dL) while maintaining safe glucose ranges (80–130 mg/dL).

Panimalar Engineering College   Chennai, India
Bachelor of Computer Science and Engineering GPA: 7.96/10   *2021*
- Built a Remote E-Proctoring System with advanced machine learning models and computer vision integrating with Amazon S3 cloud infrastructure to prevent malpractices during online exams (ML/Cloud).

EXPERIENCE

Lumel Technologies – xViz   Chennai, India
Associate Product Developer   *June 2021 – Aug 2024*
- Contributed to the design and maintenance of Power BI custom visuals using D3.js, Highcharts, and AG Grid, supporting enterprise users across diverse reporting needs.
- Collaborated on the successful development and release of 12+ xViz visuals to Microsoft AppSource, resulting in 92% client adoption and improved user engagement.
- Helped resolve over 300 production issues and feature requests, enhancing overall product stability and reducing incident resolution time by approximately 40%.
- Worked on implementing key features such as *Export to Excel* and reusable migration handlers, and assisted in optimizing legacy code to reduce rendering time by up to 35%.
- Participated in research and feasibility analysis for Gantt chart tools, contributing to the evaluation and recommendation of migrating from AnyGantt to DHTMLX to improve performance.
- Actively contributed to agile sprint planning, authored technical documentation, participated in peer code reviews, and supported onboarding of junior developers to foster team knowledge sharing and steady delivery pace.

Solarillion Foundation   Chennai, India
Undergraduate Research Assistant - Intern   *June 2019 – Aug 2021*
- Conducted research on adversarial attack techniques targeting deep reinforcement learning agents and developed an optimized agent robust to such attacks.
- Built a two-stage predictive model to identify flight arrival delays and estimate delay duration using weather data at departure, achieving enhanced accuracy.

TECHNICAL SKILLS

Programming Languages & Frameworks: Python, R, SQL, NoSQL, TypeScript, React, HTML/CSS, Shell Scripting, REST APIs
Machine Learning & NLP: Scikit-learn, PyTorch, Hugging Face Transformers (LLMs), spaCy, Unsloth, Knowledge Graphs, Fine-tuning Large Language Models, Optimization Algorithms, Image Segmentation
Data Analysis & Visualization: Pandas, NumPy, Matplotlib, Power BI, OpenCV
Modeling & Simulation: System Dynamics (Vensim), Complex Systems Modeling, Mathematical Modeling
Development Tools & Environments: Git/GitHub, Conda, Micromamba, Postman, Jupyter Notebook, VS Code, Agile Methodologies, Software Design Patterns, Data Structures & Algorithms
Documentation & Collaboration: LaTeX, Markdown, Microsoft Office Suite

PUBLICATIONS

- **"Critical State Detection for Adversarial Attacks in Deep Reinforcement Learning,"** *2021 20th IEEE International Conference on Machine Learning and Applications (ICMLA)*, Pasadena, CA, USA, 2021.