

MOHAN VAMSI ADLURU

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EDUCATION

Zurich University of Applied Sciences(ZHAW)

Zurich, Switzerland

Master's in Applied Computational Life Sciences; GPA: 4.6/6

Sep 2024 – Present

- Built a clinical summarization pipeline by replicating an advanced research paper on hospital course summarization. Explored LLMs including Clinical-T5, LLaMA2-13B, and GPT-4, and optimized performance using Unsloth and QLoRA fine-tuning.
- 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.
- 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.
- 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 **12+ custom Power BI visuals** using D3.js, Highcharts, and AG Grid, leading to **92% client adoption** and improved product stability.
- Optimized legacy code to **reduce rendering time by up to 35%** and resolved over **300 production issues** and feature requests, enhancing overall product performance.
- Actively contributed to agile sprint planning, technical documentation, and peer code reviews to foster team knowledge sharing and maintain a 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: L^AT_EX, 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.