AKHILA PETNIKOTA

+1 (469) 861-8714 | axp210228@utdallas.edu | linkedin.com/in/akhila-petnikota/ | github.com/AkhilaPetnikota

SUMMARY: A Computer Science graduate experienced in optimizing real-time data processing and improving workflows to enhance performance and business outcomes.

EDUCATION

Master of Science, Computer Science (Data Science) Aug 2022 - May 2024
The University of Texas at Dallas **GPA:** 3.4 / 4.0
- Data Structures and Algorithms, Artificial Intelligence, Computational Geometry, Machine Learning, NLP

Bachelor of Technology (ECE), Electronics & Communications Aug 2017 - June 2021
Reva Institute of Technology - Bengaluru **GPA:** 9.05 / 10
- Data Mining, Computer Architecture & Operating Systems, Digital & Analog Electronics, Network Communication

TECHNICAL SKILLS

Languages	:	C/C++, Python, Java, SQL, PL/SQL, Javascript, Unix, Frontend(PHP, HTML, CSS, React)
Tools and Technologies	:	Hadoop, Spark, PySpark, MLflow, Jenkins, GitLab, AWS, Azure, GCP, Docker, Kubernetes
Skills	:	ML (Sci-kit Learn, TensorFlow, PyTorch), Statistical Modeling, Data Visualization (Tableau, Power BI), Strong foundational knowledge in TCP/IP, HTTP through coursework & project
Libraries/Frameworks	:	NumPy, SciPy, Pandas, Spacy, NLTK, BERT, MySQL, PostgreSQL, MongoDB

PROFESSIONAL EXPERIENCE

Data Research Analyst **| Python, SQL, Statistics, ML** [link] July 2024 - Present
Community Dreams Foundation (USA) *Dallas, TX, USA*
- Analyze trends and optimize operations, providing actionable insights for improved decision-making.
- Present findings to leadership, driving operational and pricing improvements.

Teaching Assistant **| C++, Unix Systems programming** June 2023 - May 2024
The University of Texas at Dallas *Dallas, TX, USA*
- Guided students through programming concepts, assisting with hands-on projects and real-time problem-solving.
- Enhanced student understanding of system programming and software development concepts.

Application Development Associate **| Python, SQL, Docker, AWS** July 2021 - July 2022
Accenture Solutions Private Limited(India) *Bengaluru, Karnataka, India*
- Optimized data processing workflows, improving accuracy by 20% and reducing processing time by 30%.
- Developed scalable solutions, enhancing performance and streamlining CI/CD to reduce maintenance costs.
- Enhanced data retrieval, boosting performance by 40% and improving pipeline efficiency for large datasets.

Software Developer Intern **| Java, Data Structures** [link] Jan 2021 - June 2021
Infosys Private Limited(India) *Bengaluru, Karnataka, India*
- Designed high-performance data structures, improving system efficiency and scalability.
- Developed custom algorithms to enhance accuracy; achieved top score in InfyTQ exam at Reva University in 2021.

SELECTED PROJECTS

Computational Geometry - 3D Mesh Generation Library in **C++** [link] Apr 2024 - May 2024
- Implemented 2D/3D mesh generation algorithms in C++, supporting multithreading and exporting to .ply files.
- Utilized Python with Open3D for visualizing mesh results, with plans for future CUDA/OpenCL optimizations.

Spark Machine Translation **| Apache Spark, ML, Text Processing, Scalable Data** [link] Jan 2023 - Apr 2023
- Developed a large-scale machine translation system using Apache Spark, implementing language detection and translation across multilingual datasets.
- Utilized custom tokenization, vectorization, and Spark ML for efficient text processing and scalable translation.

Fake News Detection in Social Media **| NLP, Machine Learning, TF-IDF** [link] Jul 2023 - Nov 2023
- Developed a machine learning model using Natural Language Processing (NLP) to detect fake news.
- Preprocessed social media data, applied TF-IDF for feature extraction, and trained multiple models, with Support Vector Machines achieving the highest accuracy.

Stock Price Prediction for Amazon **| Python, Machine Learning** [link] June 2023 - Aug 2023
- Developed a (RNN) model for time series prediction to forecast Amazon (AMZN) stock prices**.**
- Evaluated model performance using Root Mean Squared Error (RMSE) to quantify prediction accuracy.

Smart trolley with Social Distance Monitoring **| IOT, Python, Web Technologies, HTTP** Jan 2021 - May 2021
- Designed a smart shopping trolley with SBC and PHP, integrating Google Text-to-Speech for real-time notifications and MySQL for product tracking and payment processing.

CERTIFICATES: Python Specialization[link], SQL Certification [link], Java Specialization[link]
PUBLICATION: Presented "SMART TROLLEY WITH SOCIAL DISTANCE MONITORING" at ICECIM 2021[link]

Leadership: Technical Head at FORCE, ECE department forum; led community growth, awarded a merit scholarship for academic excellence.