AKHIL PAMARTHY

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PROFESSIONAL SUMMARY

I specialize in building advanced AI systems and services, with a proven track record of leading successful initiatives. Having managed large engineering and product teams, I engineer solutions that have a meaningful impact for thousands of users.

CORE SKILLS

- Programming Languages: Python, Java, C#, PL/SQL, SQL
- Machine Learning & AI: Machine Learning, Deep Learning, Generative AI, Computer Vision, Natural Language Processing (NLP), AI Automation, Transformers, Topic Modeling (LDA, TF-IDF), Coherence Scoring, Feature Engineering, Model Fine-Tuning, Hyperparameter Tuning
- Frameworks & Libraries: PyTorch, TensorFlow, Keras, Detectron2, MONAI, spaCy, NLTK, Word2Vec, Scikit-learn, OpenCV, nibabel, nilearn
- Cloud & DevOps: Microsoft Azure (Blob Storage, App Service, Azure Functions), AWS CLI, Docker, Google Colab
- Databases & Data Management: PostgreSQL, MySQL, Oracle DB, PL/SQL, Redis, MongoDB
- Data Processing & Web Scraping: PySpark, Selenium, Beautiful Soup, Pandas, NumPy, Regex
- Data Visualization: Matplotlib, Power BI
- Tools & IDEs: Jupyter Notebook, Visual Studio Code, PyCharm, Terminal
- Operating Systems: Linux, Windows

WORK EXPERIENCE

Machine Learning Engineer Intern

Eitacies Inc (Concurrent with M.Sc. studies under Dr. Mete Mutlu) | Sep 2023 – Dec 2023

- Supported AI research for brain imaging-based diagnostics, extending classification models to identify cocaine dependence from SPECT scans.
- Analyzed over 5 million anonymized clinical records, improving mental health diagnostic accuracy through advanced ML techniques.
- Designed and deployed end-to-end AI pipelines processing raw DICOM/NIfTI medical imaging data to interpretable outputs, increasing reproducibility for clinical decision-making.
- Extracted diagnostic themes using LDA, TF-IDF, and coherence scoring to enable data-driven patient clustering and predictive modeling.
- Built scalable NLP preprocessing workflows with spaCy, NLTK, and regex; visualized topic distributions with Matplotlib for clinical insights.
- Streamlined unstructured data ETL pipelines using PySpark and Google Drive, reducing data processing time by 40%.
- Leveraged Google Colab and cloud resources to optimize secure, cost-efficient model training and experimentation.
- Worked with medical imaging libraries MONAI, nibabel, and nilearn for multi-modal text-imaging data alignment.

Tech Stack: Python, PyTorch, MONAI, PySpark, spaCy, NLTK, TF-IDF, LDA, coherence scoring, Matplotlib, Google Colab, Google Drive, regex, nibabel, nilearn.

AI/ML Engineer

Gray Logic Technologies Pvt Ltd | Apr 2020 – Apr 2022

- Led development of AI-powered insurance claims processing system, reducing average turnaround time from days to minutes via real-time image analysis.
- Reduced operational costs by 25% by automating claims triage and damage estimation using AI models integrated with customer-facing platforms.
- Built and maintained a 10,000+ annotated vehicle damage image dataset with VGG Image Annotator, enabling scalable retrieval via Azure Blob Storage and Redis cache.

- Developed Detectron2-based object detection and segmentation models, employing data augmentation to achieve >90% F1-score on damage identification.
- Deployed models as RESTful APIs on Azure App Service, supporting thousands of concurrent users seamlessly.
- Mentored 3 junior engineers on model deployment best practices and collaborative code reviews, improving team efficiency by 20%.

Tech Stack: Python, Detectron2, PyTorch, Azure Blob Storage, Redis, Azure App Service, RESTful APIs, Data Augmentation.

Procurement Analyst
Aliens Developers Pvt Ltd | May 2019 – Mar 2020

- Applied engineering expertise to optimize procurement and inventory workflows, reducing overstock by 15% through real-time vendor analytics.
- Collaborated closely with engineering teams to align supply chain decisions with project specifications and timelines.
- Managed procurement data using PL/SQL and Oracle DB; developed live dashboards in Power BI to monitor inventory and procurement KPIs.

Tech Stack: PL/SQL, Oracle DB, Power BI, Microsoft Excel.

EDUCATION
Master of Science (M.Sc.) in Computer and Information Sciences
East Texas A&M University — *Dec 2023*

- Relevant Coursework: Programming, Algorithms, Operating Systems, Networking, Databases, Data Analysis, Big Data, Machine Learning, AI
- Project Work: Developed COVID-19 testing framework with adaptive pool sizes and machine learning-powered chatbot for enhanced diagnosis and personalized healthcare support.

LICENSES & CERTIFICATIONS

- Docker Foundations Professional Certificate – Docker, Inc (May 2025)
- RESTful API Developer – LinkedIn Learning (May 2025)
- Software Engineering Job Simulation – Hewlett Packard Enterprise, Forage (May 2025)
- Software Engineering Job Simulation – Wells Fargo, Forage (Jun 2025)

ACHIEVEMENTS
- 3× IT Wizard Competition Winner (2009–2011) – Recognized for leadership and programming excellence.
- 2nd Place – Formula Kart Design Challenge – Awarded for best engineering design, AutoCAD precision, and aerodynamic modeling.