Gargeya Akhilram Durgempudi (Akhil)

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EDUCATION & CERTIFICATIONS

Master of Science in Computer Science from University of Houston-Clear Lake, Houston, TX, will graduate in May 2025.

Bachelor of Technology in Computer Science Engineering from Koneru Lakshmaiah University, India, graduated in Apr 2023.

MS Azure Certifications: Devops Engineer Expert Az-400, Microsoft Developer Associate Az-204.

TECHNICAL SKILLS

Development: Full Stack Web Development (React JS, Spring Boot), Web Technologies (HTML, CSS, JavaScript), Agile.

Programming/ Modern Languages: Java, Python, C.

Software/Tools: Git, VS Code, Eclipse, Google Colab, Maven, Tomcat, ServiceNow (ITSM, Workflows, REST APIs).

Databases & Operating Systems: PostgreSQL, MySQL; Windows, Linux, Putty.

Courses: Artificial Intelligence, Machine Learning, Software Engineering, Object-Oriented Programming (OOP).

EXPERIENCE

ForeSight – Early Warning System

- Designed and developed an early warning system for weather conditions and disasters, aggregating real-time data from various organizations. The main module works on top of the weather monitoring application and provides real time alerts for specific weather conditions, for user-specified locations. This integrated alerts module leverages GMAIL-SMTP & geolocation, to send notifications.
- Designed a disaster module that tracks earthquakes, tornadoes, wildfires and hurricanes. Used Matplotlib, TensorFlow, Keras for visualizing trends to report out interactive graphs.

Tech Stack: React.js (Frontend), Python (Data Processing), Matplotlib (Data Visualization), PostgreSQL (Database), REST API (API Integration), Git (Version Control), Gmail-SMTP (Email Notifications), GitHub (Project Frontend deployment), Render (Project Backend deployment).

Shopee – Retail Shopping Platform

- Developed an e-commerce platform with Java using Spring Boot, featuring user authentication, order management, and payment processing.
- Redesigned and simplified the UI using agile practices for an enhanced user experience. Integrated ServiceNow ITSM to automatically generate incident tickets for user issues like failed payments or login errors.
- Used ServiceNow Workflows for automated escalation and resolution tracking, and REST APIs for backend communication.

Tech Stack: Java, Spring Boot, MySQL, ServiceNow (ITSM, Workflows, REST APIs).

DailyCast – Real-Time Weather Monitoring App

- Developed a real-time API-based weather monitoring application using Python, offering data visualization and predictive insights.
- Built a location module to provide precise weather updates & a safety module to recommend precautions to users based on forecasts.

Tech Stack: Python (Data Processing), Flask (Backend), OpenWeather API (Data Source), Matplotlib & Pandas (Visualization), Git.

Travello – Smart Recommendation Platform for Tourism

- Designed and developed a tourism website to recommend budget-friendly travel experiences, using Django to create a user-friendly interface. Implemented a personalized travel suggestion engine, which takes user preferences like budget constraints, etc. into consideration, and can also make activity-based recommendations like hiking, beaches, skiing, etc.

Tech Stack: HTML/CSS & Bootstrap (Frontend), Django (Backend), Google Maps API (Location Services), Git (Version Control).

Lung Cancer Detection – Deep Learning Model

- Developed a Python-based deep learning model leveraging Transfer Learning (EfficientNet B2 Architecture), achieving 90.18% detection accuracy. Evaluated the model using validation accuracy, F1 score and confusion matrix, and further enhanced accuracy & processing speed.
- Implemented feature extraction, image segmentation & data augmentation for better classification of non-small cell lung cancer types.
- Published a research paper for IEEE on automated lung cancer detection using CT scan images, eliminating manual radiologist diagnosis.

Tech Stack: Python.

Teaching Assistant / Mentorship

- Acted as a TA for software engineering related subjects and served as a mentor for Java, Python, and Data Structures & Algorithms. Also helped students improve their programming abilities by assisting them with their academic projects.