Kevin Pulikkottil

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Education:

The University of Texas at Dallas
Bachelor of Science in Computer Science (May 2026)

Technical Skills:

- **Programming Experience:** Java, C++, MIPS Assembly, Python, SQL, Haskell, Prolog

- **Tools & Technologies:** AWS, Git, Data Visualization, Jupyter Notebooks, TensorFlow, Google Colab

- **Machine Learning & AI:** Neural Networks, Regression Models, NLP, Data Preprocessing, CNN, YOLOv3

- **Cloud Computing & Security:** AWS Cloud Services, Network Security, Cloud Billing

- **Problem Solving:** Data Structures, Algorithms, AI Systems, Linear Algebra

Current (Relevant) Courses:

Data Structures and Introduction to Algorithmic Analysis

Analysis of algorithms including time complexity and Big-O notation. Analysis of stacks, queues, and trees, including B-trees. Heaps, hashing, and advanced sorting techniques. Disjoint sets and graphs. (Java, Python, C++)

Software Engineering

Introduction to software life cycle models. Software requirements engineering, formal specification and validation. Techniques for software design and testing. Cost estimation models. Issues in software quality assurance and software maintenance. (Java, Python, C++)

Project Experience:

Algoverse Coding Academy
AI Research Program – February 2024

- **Breast Cancer Detection Model:** Developed a machine learning model using the Breast Cancer Wisconsin Dataset in Python (scikit-learn, pandas, NumPy) to classify breast cancer diagnoses. Achieved 92% accuracy and improved the initial model accuracy by 10%.

- **Recognizing Handwritten Digits (MNIST Dataset):** Built a Convolutional Neural Network (CNN) in Python (TensorFlow, Keras) to classify handwritten digits. Achieved a 98% accuracy on test data.

- **Predicting Diabetes Metrics**: Created a regression model using Python (scikit-learn) to predict patient diabetes metrics based on health data. Improved predictive accuracy by 15% through feature engineering and model refinement.

- **NLP for Text Summarization**: Developed a Transformer-based NLP model for text summarization using Python (TensorFlow, Hugging Face Transformers). The model achieved an 85% compression rate with 90% coherence in the summaries produced.

- **Fine-Tuning YOLO Algorithm for Object Detection**: Fine-tuned YOLOv3 for real-time object detection on a custom dataset using Python (OpenCV, TensorFlow). Improved detection precision by 5%.

Linear Algebra Matrix Operations Program

- Built a Python program to perform matrix operations, including rank calculation, determinants, and eigenvalues.

Stock Analysis Program

- Developed a tool using **Python, Matplotlib, and Finnhub API** to analyze stock data and calculate stock option prices. Enhanced the project with real-time data visualization and regression techniques.

Certifications & Honors:

- **Eagle Scout** (January 2021)

- **AWS Certified Solutions Architect - Associate (SAA-C03) Cert Prep: 1 Cloud Services Overview**, December 2023
  Skills: Cloud Services, Amazon Web Services (AWS)

- **SQL Essential Training**, May 2023
  Credential ID: AWvtxidA4C8HIGk6leG-OhkWuIq
  Skills: SQL

- **Introduction to AWS for Non-Engineers: 1 Cloud Concepts**, March 2022
  Skills: Cloud Computing, Amazon Web Services (AWS)

- **Introduction to AWS for Non-Engineers: 2 Security**, March 2022
  Skills: AWS Security, Network Security

- **Introduction to AWS for Non-Engineers: 3 Core Services**, May 2022
  Skills: Amazon Web Services (AWS)

- **Introduction to AWS for Non-Engineers: 4 Billing and Pricing**, May 2022
  Skills: Amazon Web Services (AWS)

- **How to Use Data Visualization to Make Better Decisions—Faster**, June 2021
  Skills: Data Visualization, Data-driven Decision Making