Aditya Reddy Yanamala

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Education

University of Texas at Dallas Richardson, TX

Bachelor of Science in Computer Science - AES Recipient, Dean's List *Expected May 2027*

Relevant Coursework: Data Structures and Algorithms, Software Engineering, Computer Architecture, Systems Programming

Leadership: ACM Research Lead, AKPsi Mu Rho Tech Cohort Lead

Technical Skills

Languages: Java, Python, C++, JavaScript, Node.js, React, HTML/CSS, SQL, UNIX

Developer Tools: Git, Docker, VS Code, Visual Studio, PyCharm, Google Cloud Platform, n8n, MongoDB

Libraries: PyTorch, TensorFlow, Numpy, Pandas, Keras, Scikit-learn, Matplotlib, Selenium, Google ADK

Experience

ML/AI Engineering Intern May 2025 – Aug 2025

Alura *Frisco, TX*

- Created content generation/interaction tools and automated posting to social media platforms, saving 6+ hours per week
- Built and deployed an autonomous agent architecture integrated with ADK to automate marketing across 30+ accounts
- Enhanced a state-of-the-art diffusion-based virtual makeup try-on model (U-Net backbone) by integrating MediaPipe for more accurate facial landmark detection and deployed the system on Google Cloud Platform for scalable performance

Research Intern September 2024 – November 2024

Association for Computing Machinery *Richardson, TX*

- Researched with a group of 5 to improve management of neurological disorders such as epilepsy and ALS as well as improving assistive technology (e.g., prosthetics) through the utilization of non-invasive EEG-based Brain Computer Interface systems
- Designed deep learning models for EEG-based Brain-Computer Interface systems, focusing on creating an efficient, novel hybrid artificial neural network architectures optimized for low-power edge computing to significantly reduce latency
- Utilized Convolution Neural Network (CNN) architecture and Graph Neural Network (GNN) architecture to develop a hybrid architecture that accurately classifies motor imagery brain signals from EEG data while using low processing power

Projects

AKPsi GPT | *Flask, React, Heroku, Git, Google Sheets* August 2025

- Boosted chapter member awareness significantly through developing a full-stack application, connecting Flask and React
- Integrated Google Sheets API to retrieve data of 300+ members and a GPT-4o Model for querying and intelligent answering
- Implemented preserved chat history and created the mobile UI, leading to a 20% increase in the application's member usage

Living Insights | *Python, Scikit-learn, Numpy, Pandas, RandomForest, XGBoost, Geopy, Matplotlib* April 2025

- Designed full-stack app used to predict housing prices, crime rates, weather, and infrastructure on 40,000+ zip codes
- Built and integrated ML models, such as Random Forest and XGBoost, for real-time predictions based on map pinpoints
- Developed a front-end using Streamlit with interactive maps and received MAEs ranging from 0.4 - 0.65 for the models.

NeuroVision | *Python, PyTorch, TensorFlow, Numpy, Keras, Pandas* September 2024 – November 2024

- Conducted extensive research on deep learning models, including Convolution Neural Networks (CNNs), Long Short-Term Memory (LSTMs), Graph Neural Networks (GNNs), and dimensionality reduction techniques such as T-SNE
- Won Best Research for engineering a compact CNN-GNN hybrid architecture, allocating CNN layers to temporal dimension processing and GNN layers to spatial dimension analysis, enhancing feature extraction by 19% and allowing edge computing
- Developed a novel hybrid compact CNN-GNN architecture that improved upon the state-of-the-art baseline CNN model from a global-specific accuracy of 65.07% to 84.31% on the PhysioNet EEG Motor Movement and Imagery Dataset

Psify | *JavaScript, TypeScript, SQL, Docker* November 2024

- Won 2nd in HackFin 2024 to develop an application to streamline financial operations of Alpha Kappa Psi-Mu Rho chapter
- Produced a web application to manage complicated chapter finances by allowing for the parsing of budgeting spreadsheets, creation of insightful membership pie charts, and allowing community engagement through events and fundraising features
- Implemented payment integration by using Stripe and used a Docker SQL database and Auth0 to create unique logins and future proof our service in order to make it as effective as possible in the long term

Honors

ACM Best Research Fall 2024- Awarded for research in hybrid ML models for EEG-based Brain-Computer Interfaces

HackFin 2024 2nd Place- Achieved 2nd place in a hackathon by developing a web application for managing finances