GAGAN KONANA NAGARAJ

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EDUCATION

Arizona State University   **August 2022 - May 2024**
Master's, Computer Science   *GPA: 3.89*

National Institute of Technology Karnataka   **July 2018 - April 2022**
Bachelor's, Computer Science   *GPA: 7.72*

PROFESSIONAL EXPERIENCE

AdviNOW Medical   **Scottsdale, AZ, USA**
Software Engineer Intern   *June 2023 - Present*
- Create an Ensemble Model comprising Support Vector Classifier, Random Forest, and Multinomial Naive Bayes algorithms for the Insurance Mapper task, aimed at identifying parent insurance entities.
- Utilize BERT, XLNet and AWS Comprehend Medical to implement NLP techniques to identify and establish relationships between symptoms and CPT codes.
- Finetune Bayesian model driven Multi-lingual triage processes by cross-referencing patient inputs with a comprehensive illness database.
- Built a Dataframe compare system to facilitate quality migration from Neo4j to PostgreSQL driven backend.

Store Intelligence   **Pleasanton, CA, USA**
Software Engineer Intern   *April 2022 - August 2022*
- Collaborated to develop a C++ 11 multithreaded application with integration of SQLite3 running on Linux deployed on a Cortex-A53 SOM as an Edge Computing device named Access Point (AP) with primary function of binary protocol communication with FreeRTOS-based firmware. Refactored application further to facilitate Domain Specific Language.
- Architected, Presented, and Programmed an accelerated communication protocol between Cortex-A53 SOM and FreeRTOS to increase pace of OTA data transfer to BLE devices to concurrently managing transfers between devices, effectively reducing RF cycle wastage and achieving a time savings of over 8 seconds (a 150% improvement) per update.
- Reduced testing time and resources by more than three-fourths through implementation of a .NET based Test application to replicate cloud functionalities, enabling autonomous and simultaneous testing of multiple Access Points (APs) in an efficient manner.
- Accomplished integration of a QR code based store-agent login system with 256-bit AES encryption into a consumer-based IOS application, resulting in enhanced security and user experience.
- Managed and supported Continuous Integration for 3 projects, ensuring smooth software delivery using Jenkins.

eSamudaay   **Bengaluru, Karnataka, India**
Software Engineer Intern   *October 2021 - February 2022*
- Constructed APIs for a decentralized commerce platform using Django with integration of PostgreSQL.
- Architected and Collaborated with frontend team to build a backend feature leveraging item labels to allow users to build dynamic custom UI for their marketplace.
- Demonstrated problem-solving skills by identifying and fixing bugs through corner case unit testing in over 15 existing endpoints.
- Integrated additional unit tests for existing APIs using Pytest framework, leading to a improvement of 8% in overall coverage.

Graphene AI   **Bengaluru, Karnataka, India**
Software Engineer Intern   *May 2021 - September 2021*
- Achieved a high level of accuracy in language detection and filtering by remodeling and deploying a Deep Learning model using Tensorflow with an F1-score of 0.93 to pass reviews into "Sentiment Analysis" stage of pipeline.
- Improvised Logistic regression part of the core Sentiment Analysis model to increase the overall accuracy by 2%
- Optimized data extraction processes by automating it with web scraping frameworks (Scrapy and Selenium).
- Improved data manipulation with development of data visualization tools using Python and Streamlit.

PROJECTS & OUTSIDE EXPERIENCE

F1 Race Winner Predictor   **Arizona State University**
Course Project   *January 2023 - April 2023*
- Project aims to utilize various data, such as driver and team analytics, historical race data, weather conditions, and circuit characteristics, to train an ensemble model consisting of SVC and Random Forest Classifier, to generate accurate winner predictions.

Similarity-Aware Channel pruning for Convolutional Neural Networks   **National Institute of Technology Karnataka**
Thesis   *July 2021 - March 2022*
- Proposed a novel channel pruning method to accelerate and compress CNNs, allowing deployment on resource-constrained devices for computer vision related tasks. The method compares similarity of output feature maps and eliminates redundant channels.

SKILLS & INTERESTS

Skills: C/C++, C#, Python, CUDA, Django, Elixir, FastAPI, FPGA, GraphQL, gRPC, Hadoop, Jenkins, Kotlin, Kubernetes, Linux/Unix, MySQL, Natural Language Processing (NLP), Postgres, Pytorch, REST APIs, Selenium, Sentry, Tensorflow, Unreal Engine, Datadog, Bash, AWS, Computer Vision, Flask, Git, iOS/Swift, MATLAB, Android Development