Kiran Surya Sekhara Reddy

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EDUCATION

2022 – 2024

UNIVERSITY OF MARYLAND BALTIMORE COUNTY — **Masters, Computer Science**

Courses: Advanced Computer Architecture, Machine Learning, Coding Theory, Software Process Management, Data Privacy, Project Management Fundamentals, Design and Analysis of Algorithms, Quantum Computation, Active Cyber Defense, Crowd Computing

Current GPA: 3.9

2016 – 2020

SJB INSTITUTE OF TECHNOLOGY (VTU) (3.4/4 CGPA) — **BE, Computer Science**

Courses: Operating Systems, Data Structures, Design and Analysis of Algorithms, Big Data Analytics, MachineLearning, Networking, Databases, Advanced Computer Architecture, Internet of Things

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TECHNICAL SKILLS

Languages: Python, Java, C, C#, HTML5,CSS3, JavaScript, Typescript, JQuery, Ajax
Developer tools: VS Code, Visual Studios, Eclipse, Power BI service and Desktop, Jupiter Notebook, Tableau, SQL Server Management Studios, Swagger, SSIS, SSRS, SSAS
Databases: MySQL, Oracle DB, SQL, PostgreSQL, NoSql, DynamoDB
Technologies/Frameworks: Ado.net, Asp.net, Asp.net MVC, DotNet Core V(5-9), Wcf, Angular, React, RESTful APIs, FastAPI, OpenAI 3.0, Node
Cloud & DevOps: AWS(EC2, S3, Lambda, DynomoDB), CDK, Kubernetes, Docker, CI/CD (Github Actions, Jenkins), Git
AI/ML Competencies: Tensorflow, Pytorch, UNets, Transformers, Hugging Face, SpaCy, NLP, Pandas, GraphNets, Attention, Neural Networks

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EXPERIENCE

09/2024 – 01/2025

Full Stack Developer with Automation Skills at IT Concepts Inc — **Woodlawn, USA**

- Worked for Social Security Administration at their headquarters at Woodlawn MD.
- Debugged and resolved critical issues in the FPDS V&V website, originally built in Classic ASP (2007), ensuring the platform's functionality for its biannual usage.
- Conducted in-depth analysis of legacy ASP files to identify and fix frontend and backend errors, ensuring the website's functionality for its biannual operations.
- I Initiated the redevelopment of the FPDS V&V website using modern technologies, including .NET Core V9 for the backend, Angular 19.0.7 for the frontend, and PostgreSQL for the database and started working on the project from scratch. I was the only person handling full redesigning from end to end.
- Designed and developed a user-friendly landing page with seamless integration of four APIs, enhancing the platform's usability and efficiency.
- Implemented AWS-based solutions for cloud-native development, ensuring high availability and cost optimization.
- Designed CI/CD pipelines using GitHub Actions to automate deployments and integrate Docker for containerization and scalability.
- Created reports in SSRS and created packages in SSIS
- Implemented AWS-based solutions for cloud-native development, ensuring high availability and cost optimization using services such as ECS, EKS, and Fargate for containerization.
- Progressed to building a comprehensive maintenance page to streamline administrative tasks and ensure long-term platform sustainability.

08/2023 – 08/2024

University of Maryland Baltimore County — **Arbutus, USA**

- Graduate Research Assistant for NOAA and NASA Project (Full Stack and AI development).
- I led the development of an AI-based predictive air quality model for NASA's and NOAA Project, collaborating with experts to enhance an existing detection model.
- Developed and implemented predictive models for air quality analysis, focusing on Ozone and PM2.5 concentrations using advanced deep learning techniques.
- Developed APIs and created structured tables for a new set of data in an internal NOAA website using .NET Core, ensuring seamless data integration and updates.
- Built a 1D CNN model for time series forecasting, leveraging temporal patterns in data for accurate predictions.
- Designed and implemented a 2D U-Net model with Transformers and self-attention mechanisms to enhance spatial and temporal feature extraction for model prediction.

- Integrated and processed time series data from two distinct datasets: AirNow and Forecast data, ensuring effective data preparation and model input.
- Conducted model evaluation and optimization to improve prediction accuracy and reliability.
- This showcased my proficiency in technology and commitment to environmental monitoring for both Earth and space applications.
- I led integration of RPA with Chat bots to automate environmental data collection and processing. Developed Chat bots with natural language processing for intuitive data visualization and analysis, enhancing decision-making and advancing environmental monitoring for terrestrial and space applications.
- Led the development of an AI-based predictive air quality model using AWS cloud services.
- Designed and deployed cloud-native applications leveraging AWS Lambda, DynamoDB, and Kubernetes.
- Utilized Kubernetes to deploy models in distributed environments, ensuring scalability and efficiency.

02/2021 – 06/2022 ***IT Development Senior Associate at NTT Data*** **Bangalore, India**

- Worked for Caterpillar based Solar Turbines client (San Diego, USA).
- Delivered high-quality software solutions as a .NET developer, specializing in backend development with ASP.NET MVC, .NET Core V8, and WCF, and frontend development using Angular, React, HTML5, and CSS3.
- Designed and implemented multiple dynamic Angular screens and developed numerous robust APIs to enhance application functionality.
- Managed and optimized backend data efficiently using SQL Server Management Studio, ensuring data integrity and performance.
- Created impactful visualization reports using Power BI and Tableau, aiding in data-driven decision-making processes.
- Worked on AWS cloud infrastructure, setting up scalable EC2 instances and automated deployments using Terraform.
- Conducted code reviews and implemented robust unit tests to ensure high-quality deliverables.
- Conducted knowledge transfer sessions for junior team members, fostering skill development and collaboration within the team.

01/2020 – 02/2021 ***Project Trainee / Junior Software Engineer at Zensar Technologies*** **Hyderabad, India**

- Got trained on Dot net Full stack development with a certified Microsoft trainer, gaining essential skills.
- Designed and developed a project titled 'Airport Management System' with HTML and CSS in frontend and ASP.net MVC with MSSQL in the backend.
- Skilled in designing and implementing robust back-end architectures using .NET modern frameworks.
- Proficient in database management and optimization with MSSQL, PostgreSQL, and MySQL.
- Successfully implemented CI/CD pipelines with tools like GitLab, Jenkins, and Docker.
- Enhanced application performance through rigorous testing, debugging, and optimization.

01/2019 – 12/2019 ***Full Stack and Machine Learning Intern at DataLore Labs PrivateLimited*** **Bangalore, India**

- Designed and developed a project titled Used Car Portal. It was built on Dotnet Framework with Angular frontend and Oracle DB backend.
- Presented and Published a paper titled "Prediction of Resale Value of the Car Using Linear Regression Algorithm" in International Journal of Innovative Science and Research Technology (IJISRT) Journal.
- Learnt basics of Machine learning algorithms and advanced python programming.

PROJECTS

02/2024 – 04/2024 **SafeTrade Enhancing Trust in Facebook Market Place**

- Designed and implemented a machine learning system to identify fake accounts on Facebook Marketplace, improving user security by distinguishing Marketplace-specific accounts from regular profiles.
- Conducted comprehensive surveys to gather user insights and analyzed datasets to identify key trust indicators for account verification.
- Developed robust criteria to verify buyers and sellers, enhancing the credibility and reliability of transactions on the platform. Contributed to fostering a safer online marketplace environment, improving user trust and engagement.
- Leveraged AWS services such as AWS Lambda and Amazon SageMaker to deploy machine learning models at scale, ensuring high performance and cost efficiency for real-time account verification.

02/2023 – 04/2023 **SafeGuard: Safeguarding LinkedIn Privacy by Identifying Authentic Companies, and Scraping Resume**

- Built and implemented machine learning models, including Decision Trees and multi-classification algorithms, to determine company legitimacy and assign risk levels, using SMOTE to address data imbalance and k-fold cross-validation to validate robustness.

- Designed a function to generate company risk levels based on extracted features, incorporating policies for risk evaluation and resume field selection for subsequent analysis.
- Integrated a scraper to extract resume details based on predicted risk labels, applying policies to identify key fields and assess their relevance to company legitimacy.
- Utilized AWS services like Amazon EC2 for scalable model training and AWS Glue for efficient data preprocessing and transformation, enabling faster and more efficient processing of large datasets.
- Conducted surveys with 45 participants across varied demographics to identify 11 critical features for company legitimacy, leveraging both quantitative and qualitative analysis to enhance model effectiveness.

09/2022 – 12/2022 **Employee attrition prediction using Machine Learning models**

- Trained a dataset using Decision Tree, Support Vector Machine (SVM), K-Nearest Neighbors, XGBoost, and Convolutional Neural Network models.
- Integrated AWS S3 for secure data storage and AWS SageMaker for streamlined model deployment and management, allowing for real-time predictions and scalability.
- Conducted a comprehensive evaluation process and applied hyperparameter tuning to optimize model performance. Selected the most effective model for accurately predicting employee attrition.

02/2019 – 03/2020 **Early flood detection and disaster victims identification**

- This project was built in the view of helping the society. The project is divided into two parts. First part of project detects the floods coming out from Dam at early stages by using IOT techniques and procedures.
- Utilized four sensors and Arduino to detect potential floods from dams and developed an alert system with a buzzer, integrated with the Telegram app for real-time updates.
- Designed a Deep Learning-based system to identify flood victims by building a CNN model capable of predicting human body parts for effective rescue operations.

ACHIEVEMENTS

- **Written and published a book titled 'Wireless Sensor Networks & Internet of Things' with ISBN '978-1-68576-002-1' under InSc Publishing House (IPH)**
- **Successfully patented and published project 'Machine Learning System for Early Cardiovascular Disease Prediction'.**

CERTIFICATIONS

1. Certification on "Web Programming using HTML and JavaScript" by Ethnotech Academic Solutions.
2. Certification on "Web Technologies" by Ethnotech Academic Solutions.

PUBLICATIONS

1. Presented and Published a paper titled "Flood monitor and detecting system using IOT and Identification of victim using Image Processing" in International Research Journal of Engineering and Technology (IRJET) Journal.
2. Presented and Published a paper titled "Prediction of Resale Value of the Car Using Linear Regression Algorithm" in International Journal of Innovative Science and Research Technology (IJISRT) Journal.
3. Presented and Published a paper titled "Design and Comparative Analysis of Algorithm of Processing Time, Data Aggregation Time, Packet Delivery Ratio and Energy Consumption" in 1st International Conference on Emerging Trends in Engineering, Science and Management (ICETESM-2019).
