Naga Vigneswari Kodali

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Experience

California State University East Bay

Graduate Student Research Assistant *August 2024 - May 2025*

- Collaborated with Machine Learning and Biology departments to develop underwater robots capable of detecting and tracking specific species at depths of 300 feet, enhancing research capabilities in marine biology.
- Implemented a YOLO-based image detection model for identifying target species, improving the accuracy and efficiency of species identification in underwater research.

HSBC Technology

Software Engineer *August 2022 - August 2023*

- Maintained a website for the Global Payments Investigations (GPI) team, serving over 2500 HSBC customers, ensuring high availability and performance.
- Developed and deployed the website functionality for Hong Kong operating unit (OU) with additional business requirements like changing layout dynamically regarding sender and receiver details positioning, and integrated respective country currencies based on the default operating unit.
- Redeveloped code using HTML and Java, and tested the product in SIT and UAT environments, ensuring quality and functionality.
- Collaborated on the development of internal developer tools used across multiple teams, enhancing workflow efficiency by 15%.
- Implemented new product features in Python and Java under the guidance of senior developers, contributing to a successful product release cycle.
- Performed environment health checks for DEV, SIT, UAT, Pre-PROD, and PROD environments using E2 - IBM WebSphere Portal, ensuring all servers were operational and promptly restarting any that were down, which minimized downtime and maintained system stability.
- Managed incidents by raising tickets in the GIMS portal and coordinating with database and operations teams, which streamlined issue resolution and improved response times.

Advanced Business and HealthCare solutions

Software Engineer Intern *February 2022 - June 2022*

- Contributed to the creation of the Lincoln College website as a member of the Frontend Development team, utilizing HTML, JavaScript, TypeScript, and CSS, resulting in a platform used by over 2000 individuals, including university staff and students.
- Addressed and resolved bugs identified during the production phase, which ensured a smooth user experience and reduced user-reported issues.
- Participated in Agile ceremonies, including daily standups, sprint planning, and retrospectives, and actively contributed to defining user stories.
- Utilized React.js and Google App Engine for developing client-facing components, improving user interaction and performance.
- Implemented responsive design principles using HTML5 and CSS, which improved mobile usability by 20%.

EDUCATION

California State University East Bay - Hayward

Master of Science in Computer Science(GPA-3.92/4) *August 2023 - May 2025*

- **Relevant Coursework**: Advanced Algorithms, Operating Systems, Machine Learning, Theory of Computation, System Design,Web Systems, Advanced Artificial Intelligence, Cyber Security, Cloud computing,DataBase Management Systems.

Prasad V Potluri Siddhartha Institute of Technology Vijayawada

Bachelor of Technology in Computer Science(GPA-9.53/10) *August 2018 - May 2022*

- **Relevant Coursework**: Design and Analysis of Algorithms, Operating Systems, Cloud Computing, Computer Networks, Database Management System, Computer Organization, Software Engineering, Object Oriented Programming.

PUBLICATIONS

- **Convolutional Neural Networks based Enhanced Forest Monitoring System for Early Fire Detection**, IEEE
- **Pneumonia Detection on chest X-ray images Using Ensemble of Deep Convolutional Neural Networks**,IEEE

CERTIFICATIONS

- Certification in Amazon Cloud Foundation from **AWS Academy.**
- Certification in Network Visualization Concepts from **VMware**.
- Certification in Java & Problem Solving Concepts from **HackerRank**.

SKILLS

- **Subjects of Interest:** Data Structures and Algorithms, Object-Oriented Programming (OOP),Machine Learning, Web Development,Artificial Intelligence(AI)
- **Programming languages:** Python, C, C++, Java,Php,R,MATLAB,Go,Dart
- **Web Technologies :** React.js, Angular, Node.js, TypeScript, HTML5, CSS3
- **Cloud Platforms:** AWS (S3, DynamoDB, EC2, Lambda,SQS,Cognito), Google App Engine
- **Databases:** MongoDB,Neo4J, MySQL,PostgreSQL,Amazon DynamoDB,Apache CouchDB
- **Automation Tools:** Gradle,Docker,Maven,Jenkins,Apache Ant,IBM WebSphere Portal
- **Tools and Platforms:** Git, GitLab,GitHub, VS Code, AWS, Google Colab,Jupyter, Roboflow, IBM WebSphere Portal,Linux shell,Windows CMD(Command Prompt),Microsoft Word,Excel,Powerpoint,Adobe

Projects

Learning Platform *October 2024 - November 2024*

- Developed a Learning Platform using **Java** and **Spring Boot** to enable user authentication, course enrollment, and personalized dashboards, leveraging **AWS Cognito** for secure login and **AWS DynamoDB** for data storage.
- Implemented role-based access control for instructors and students, providing distinct views and capabilities per role, and created RESTful APIs for course management and user-specific functionalities.
- Optimized data handling and session management for efficient performance in a scalable cloud environment, ensuring seamless user experience and secure data operations.

AWS Full Stack Application *August 2024 - September 2024*

- AWS Cloud Integration: Developed a full-stack web application integrating AWS services such as **S3, DynamoDB, API Gateway**, **Lambda**, and **SQS** for handling data storage, file management, and messaging queues.
- Scalable and Secure Architecture: Designed and deployed a scalable application infrastructure using EC2, with best practices for security and performance, including IAM roles and bucket policies for public access.
- Automation & Monitoring: Utilized AWS CloudWatch and CloudFormation for automated resource provisioning, monitoring, and managing infrastructure as code.

Pneumonia detection using ML *March 2024 - May 2024*

- Developed a deep learning model using ResNet for accurate detection of pneumonia from chest X-ray images.
- Applied transfer learning techniques with pre-trained models like VGG19 and AlexNet to compare performance and optimize the model for real-world deployment.
- Leveraged Python libraries such as TensorFlow and Keras for data preprocessing, model training, and evaluation, achieving high accuracy and robust performance on medical imaging data.

Forest fire Detection using UAV imagery *Jan 2024 - Feb 2024*

- Designed an automated fire detection system utilizing Unmanned Aerial Vehicle (UAV) imagery, applying advanced deep learning architectures such as CNN, VGG19, and DenseNet.
- Integrated real-time image analysis to detect and monitor forest fires with high accuracy, reducing the need for human intervention.
- Implemented the model using Python and PyTorch, optimizing it for UAV platforms to enhance the efficiency and speed of early fire detection in remote areas.