Email: pravallikabonthu978@gmail.com | **Mobile:** +1 575-650-1627
LinkedIn: www.linkedin.com/in/pravallikabonthu
GitHub: https://github.com/pravallikabonthu/pravallika **website:** https://pravallika-portfolio.web.app/
Portfolio: https://react-portfolio-pravallika.web.app/

Pravallika Bonthu

Professional Profile

4 years of experience as a Software Engineer is now looking to obtain Job opportunities where I can contribute my skills and experience in developing high-quality software solutions and learn new technologies.

Education

Master of Science in Computer Science | New Mexico State University **|** GPA: 3.52/4.00 **August 2022 – May 10, 2024**
Courses: Data Structures & Algorithms, Database, Data Mining, Machine Learning, Web Technologies, Computer Security, Networks, Advanced AI in Agriculture, Cryptography

Bachelor of Science in Computer Science and Engineering | Chalapathi Institute of Engineering and Technology **|** GPA: 8.42/10.00

Professional Experience

Klipsch School | Las Cruces, NM **May 2023 – August 2023**
Summer Research Intern

- I engaged in solar power data analysis, involving the evaluation of data obtained from Gateway APIs. My responsibilities encompassed data cleaning, preprocessing, and visual representation of insights using Python and Matplotlib.
- Developed a machine learning model to identify and handle outliers in solar power datasets, improving the accuracy of subsequent analysis by 30%.
- Led optimization efforts for dashboards and reporting, enhancing data scalability, visualization effectiveness, and code efficiency by automating and validating underlying code using Python programming and panda's library.
- Collaborated closely with business stakeholders to develop tailored analytic solutions, aligning with specific business requirements and objectives.
- Innovatively developed a real-time plotting system that incorporated live data directly from the Gateway API. This approach significantly enhanced the immediate visualization of crucial solar power metrics, allowing for prompt and actionable insights.

Graduate Research Assistant | Engineering College, NM **August 2022 – Present**

- Efficiently deployed various software applications to the college software center utilizing Azure cloud, PowerShell scripts.
- I've played a key role in optimizing web-based system onboarding and deployment, including transitioning to Windows 10 on Azure. My expertise lies in leveraging the Azure portal, particularly Intune, to enhance security.
- Managed and maintained software installations across the college network, ensuring optimal performance and compatibility. Demonstrated strong communication and problem-solving skills in addressing user queries and technical challenges.

HCL Technologies (Western Union) | India
Software Engineer **December 2020 – January 2022**

- Developed and implemented five critical mobile features using cutting-edge technologies, resulting in a 35% increase in user engagement and a 20% increase in revenue within the first six months.
- Collaborated with engineers on cross-functional projects, conducting manual and cross-platform testing for web and app.
- Implemented API integrations for real-time exchange rate data across multiple countries, enhancing the capabilities for currency exchange and international money transfers.
- Developed and maintained technical documentation, facilitating knowledge transfer and collaboration among team members, resulting in a 25% increase in team efficiency and productivity.
- Designed and implemented a real-time FX alert mechanism that delivers granular exchange rate updates to users, facilitating informed currency conversion decisions and optimizing international money transfer strategies.
- Implemented a session persistence mechanism to capture and preserve abandoned transactions, allowing users to seamlessly resume incomplete financial operations and enhancing the overall user experience.
- Conducted A/B experiments using the Apptimise platform to optimize various aspects of the Western Union mobile app, resulting in a 25% increase in user engagement and a 15% increase in conversion rates.

HCL Technologies| India
Software Engineer **January 2020 – December 2020**

- Developed and implemented a new responsive design framework for hybrid mobile applications, resulting in a 25% increase in mobile traffic and a 15% increase in overall user engagement and 30% increase in app downloads within first three months.

- Reduced front-end load times by 20% by implementing performance optimization techniques, such as lazy loading.
- Created configuration, build, and test scripts for Continuous Integration environments, reducing deployment time by 50% and minimizing production issues by 30%.
- Successfully integrated custom plugins to establish a seamless interface between Ionic and native functionalities for both Android and iOS platforms, utilizing the Cordova platform to access device-specific APIs and providing a consistent user experience across different mobile operating systems.
- Designed and developed robust mobile applications and websites, employing cutting-edge web technologies, and adhering to stringent coding standards, to deliver exceptional user experiences and optimize performance metrics such as load times, responsiveness, and resource utilization.

PROJECTS

Drowsiness monitoring system (Full stack Developer)

- Developed a functional prototype of the Drowsiness Monitoring System focusing on real-time drowsiness detection and alarm triggers, contributing to improved driver safety.
- Implemented ML models to detect and track driver's eye blink and face detection. Utilized Vue.js for the frontend development and created a dashboard for alarm triggers and notifications.
- Established a robust communication channel between the front-end Vue.js application and the back-end machine learning models, utilizing RESTful APIs to facilitate seamless data exchange and enable continuous updates.

Phishing Websites Detection (Backend)

- Developed a Machine Learning model to detect phishing websites with an accuracy of 97.4%. Utilized Python, NumPy, pandas, scikit-learn libraries to handle, clean and transform data, which directly corresponds to maintaining data pipelines.
- Utilized various machine learning models and performed Exploratory Data Analysis on the phishing dataset to understand and select the most appropriate model for detection, aligning with design and building of predictive models. Employed visualization libraries like Matplotlib, seaborn to present findings effectively.

Object Detection and classification in Plants, weeds, and Insect detection Using Machine Learning

- Managed end-to-end data lifecycle for an extensive agricultural image dataset inclusive of crops, weeds, and insects sourced from Kaggle. Applied robust data preprocessing techniques involving image processing, data cleaning, normalization, and effective categorization techniques essential for machine learning model development.
- Implemented a robust Convolution Neural Network architecture with multiple layers, including max pooling and dropout, ensuring accurate image classification and object detection.
- Employed the CNN model to process images and identify features related to weeds, insects, and plant health, enabling precise classification based on shape, color, and texture.
- Utilized PyTorch, TensorFlow, and Keras frameworks to implement the CNN model for image processing and feature identification, resulting in precise classification with an achieved of approximately 80%. The model accurately identified distinct features related to weeds, insects, and plant health.

House Price Prediction California

- Developed Predictive models and conducted a comprehensive evaluation of various classification and regression algorithm to determine the most accuracy predictive model for house price prediction.
- Utilized statistical analysis techniques, including time series and regression analysis, to understand and predict house price trends, enabling informed decision-making and accurate forecasting.
- Demonstrated strong expertise in diverse machine learning techniques, employing clustering, neural networks, random forest, and support vector machines to develop accurate predictive models for housing cost estimation.

TECHNICAL SKILLS

Web Technologies: HTML | CSS | JavaScript |ES5/6 | Bootstrap | React JS | Angular | Vue JS | Ionic | Cordova|
Languages & Database: Python |TypeScript | Machine Learning| NodeJS| Salesforce | SQL | AWS-beginner | Firebase | Microsoft Intune | Microsoft Azure
IDE/Tools: Visual Studio | Jira | Confluence | Google collab | Anaconda | Apptimize | Amplitude | Braze | Zendesk | Nagios | Salesforce | Visio Microsoft Office | Agile/Scrum methodologies | GIT | Postman | Wireshark | TOSCA | Data Science |

CERTIFICATIONS, HONORS, AND PROFESSIONAL ACHIEVEMENTS

- Successfully completed a Machine Learning certification course issued by IBM on coursera.
- won 2nd prize in a Technical Quiz conducted by Techwings Association at Chalapathi institute of Engg & Tech.
- Completed Internship on SMART WATER TANK from ORL industries.
- Achieved Appreciation Certificate for Se rvices rendered on Apuroopavali conducted by college.