Vidhya Lakshmi Palanimurugan

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EDUCATION

Master's in Analytics - Northeastern University, Boston, USA Jan. 2022 – Dec. 2023

Probability Theory & Statistics, Communication & Visualizations for Data Analytics, Intermediate Analytics, Enterprise Analytics, Data Mining, Data management & Big Data, SQL & Data Warehousing, Risk Management GPA: 3.9/4.0

Bachelor of Engineering in Computer Science Engineering - Anna University, Chennai, India Aug. 2009 – Apr. 2013

Object Oriented Programming, Database Management Systems, Operating Systems, JAVA Programming, Data Structures, Software Engineering, Computer Networks, Software Quality Management, Data Warehousing and Data Mining GPA: 8.3/10.0

WORK EXPERIENCE

Data Science Developer | CrowdDoing, El Dorado Hills, USA May 2024 – Present

- Designed and implemented an intuitive web-based chatbot frontend, improving user interaction and engagement.
- Developed and integrated APIs, ensuring seamless backend integration and robust security protocols.
- Authored comprehensive technical documentation and architecture diagrams, facilitating clear understanding and future development.

Mentor – Storytelling with Data | Northeastern University, Boston, USA Sept. 2022 – Nov. 2022

- Educated data analytics at Boston Day and Evening Academy (part of Boston Public Schools), focusing on data visualization using Tableau, which honed skills in presenting complex data clearly and effectively.
- Collaborated with students and school administrators to tailor educational approaches, significantly enhancing program effectiveness and student outcomes through customized teaching strategies.

Senior Infra Lead Networks | Mindtree, Chennai, India Aug. 2021 – Dec. 2021

- Analyzed network data and workflows to pinpoint opportunities for automation, leading to improved efficiency in daily network operations and process enhancements.
- Led initiatives to streamline network operations, resulting in enhanced reliability and performance of network infrastructure.

Network Security and Automation Engineer | Cognizant Technology Solutions, Chennai, India Oct. 2013 – Jun. 2020

- Gathered and analyzed service data for a major North American retailer with 1200 stores, crafting annual reports and recommendations that guided improved service delivery, aiding client decision-making.
- Implemented security policies in Cisco ASA and Firepower firewalls; deployed firewall rules in GCP firewalls using GitHub as a code repository and Jenkins as a deployment tool.
- Acted as the primary point of contact for customer escalations regarding all firewall-related issues within the Google Cloud Platform.
- Developed automation for configuring network ports in Cisco switches and Access Point (AP) devices in Cisco Wireless Controllers using Python programming, resulting in a 30% reduction in configuration time and driving process improvement initiatives.

ACADEMIC PROJECTS

Product Enhancement for Cyber Security Solutions | Real-time sponsored project | Python | Machine Learning Sept. 2023 – Dec. 2023

- Enhanced a Python application by revamping the user interface, consolidating menu options, and streamlining navigation, resulting in improved usability and efficiency.
- Expanded application capabilities by integrating new modules to support a wider range of Static Application Security Testing (SAST) tools, significantly increasing functionality.
- Utilized GitHub for efficient storage and version control of models and predictions, ensuring streamlined management and accessibility.
- Developed a novel module to visualize and assess model performance and prediction accuracy, providing deeper insights into application functionality and enriching the user experience.

Severity Prediction of Accidents in New England using Data Mining | R Studio | Data Mining May 2022 – Jun. 2022

- Performed exploratory data analysis (EDA) on a comprehensive dataset of US accidents, focusing on New England, with 47 variables and over 43,000 observations.
- Developed and evaluated multiple predictive models, including Classification Tree, Random Forest, K-Means, and Gradient Boosting, to accurately predict accident severity.
- Determined Random Forest as the most effective model, achieving 87.14% accuracy and demonstrating statistical significance in predicting severity.
- Conducted feature importance analysis and model testing, showcasing proficiency in refining models for improved predictive accuracy.

Visualizing San Franciso Police Department Incident Reports | Tableau | Data Visualization and Storytelling Feb. 2022 – Apr. 2022

- Utilized Tableau to design interactive dashboards that analyzed the San Francisco Police Department's incident reports from 2019 to 2021, highlighting crime trends and distributions across various police districts.
- Created visualizations to depict the top 10 crimes in the Bay Area, their geographical distribution, and temporal trends, enabling stakeholders to gain a comprehensive understanding of crime patterns.
- Conducted a focused analysis on Drug Offenses in the Tenderloin district, highlighting its disproportionate impact and examining correlations with crime rates in surrounding areas.
- Applied a variety of visualization techniques, including bar graphs, treemaps, maps, and side-by-side circle graphs, to effectively communicate complex data insights and provide actionable intelligence on crime trends and localized impacts.

SKILLS

Programming: Python, R Programming, SQL, HTML5, JavaScript, Java, Ansible.

Data Visualization Tools: Tableau, Power BI, Microsoft Excel.

Business Tools: GitHub, R Studio, PyCharm, Visual Studio Code, JIRA, Asana, ServiceNow, Jenkins, MySQL Workbench, Google Cloud Platform.

Soft Skills: Analytical Thinking, Problem-solving, Communication, Leadership, Time Management.