VINAY A

Master Of Engineering in Computer Engineering, Virginia Tech, VA
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EDUCATION

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY, Blacksburg, Virginia, USA. 2021 –2023

- Master of Engineering (M. Eng) in Computer Engineering- The Bradley Department of Electrical and Computer Engineering. CGPA: 3.55
- Coursework: Advanced Machine Learning, Applications of Machine Learning, Computer Vision, Data Analytics, Computer Architecture, IT Security and Trust, Product Management, R&D methods for Engineers.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, Karnataka**,** India**.** 2012 - 2016

- Bachelor of Engineering in Electronics and Communication Engineering.

WORK EXPERIENCE

TECH MAHINDRA, Pune, India 2016 – 2019

Software Engineer

- Successfully led and completed the migration of 300,000 PSTN networks to IP protocol networks, resulting in increased network performance and improved customer experience for British Telecommunications (BT).
- Received commendations from BT senior management for the successful completion of the project within the allocated timeline.
- Worked with Oracle Siebel CRM applications to execute day to day tasks efficiently.
- Managed 11 BT database repositories, ensuring data accuracy, security, and performance.
- Provided customer support to BT clients by addressing technical issues and responding to inquiries in a timely manner. Collaborated with cross-functional teams to gather requirements, identify problems, and implement solutions.
- Mentored and trained a team of engineers, enhancing their skills and knowledge in Network Migration, Database Management, and project management.
- Participated in code reviews, testing, and deployment processes to ensure quality and reliability of the software in every release.
- Expertise in Data Analysis, Design, Development, Implementation and Testing using Data Conversions, Extraction, Transformation.
- Performed Gap Analysis by gathering and analyzing business requirements from users to thoroughly evaluate the gap between the "AS IS" and "TO BE" process.
- Developed SQL queries or stored procedures used by reports to retrieve information from relational database and data warehouse.
- Wrote complex SQL queries to retrieve data from disparate tables utilizing Joins, Sub-queries and used concepts like Explain, Stats, Cast and volatile tables on SQL server.
- Developed SQL to extract and aggregate data using Oracle OLAP functions.
- Used Microsoft Office suite (word, excel, Access, Visio, PowerPoint, and Outlook) for documentation, analysis, and presentation.
- Responsible for execution, modification of the test cases, and bug verification using JIRA. Responsible for Bug management activities using JIRA.
- Created dashboard visualization for the Data Migration project through Tableau application.
- Performed Data mapping, logical data modeling, created class diagrams and ER diagrams and used SQL queries to filter data within the Oracle database.
- Responsible for architecting and implementing very large-scale data intelligence solutions around Snowflake Data Warehouse.
- Created Use Case Diagrams, Activity Diagrams, Sequence Diagrams and Diagrams in MS Visio.
- Identified system integration requirements, coordinated the collection and verification of business needs to reach the Requirement Analysis (Requirement Validation Specification), Detailed System Design Documentation Milestones.
- Developed Data Mapping, Data Governance, and Transformation and Cleansing rules for the Master Data Management Architecture using Snowflake.

REVOSEVEN TECHNOLOGIES, Bangalore, India 2020 – 2021

Software Trainer

- Successfully trained and mentored 21 engineering students in implementing Machine Learning algorithms in real-world projects, resulting in their enhanced skills and knowledge and improved employability.
- Analyzed SQL data, identifying issues, and modifying the SQL scripts to fix the issues.
- Trained students on how to create tables, stored procedures in SQL for data manipulation and retrieval, Database Modification using SQL, PL/SQL, and stored procedures.

- Trained students to develop Tableau data visualization on Kaggle projects using cross tabs, heat maps, scatter plots, geographic map, Pie charts, bar charts, and density charts.
- Created views/reports in Tableau Desktop which were published to internal team for review and further analyze the progress of all the student's reports.
- Conducted classroom training sessions, workshops, and hands-on training to enhance the students' skills and knowledge in Machine Learning concepts and techniques.
- Conducted mock interviews and provided career counseling to students seeking jobs in the field of Data Science and Machine Learning.

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THE BRADLEY DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING, VIRGINIA TECH, Blacksburg, Virginia
Research Assistant 2022 – 2023

- Contributed to the development of a predictive model that accurately predicts the probability of winning in a football match, resulting in valuable insights for stakeholders in the sports industry.
- Competed with other predictors from fivethirtyeight.com and analyzed the results.
- Worked on a project that involved the study of the dynamics of the Ikeda map, a non-linear dynamical system widely used in chaos theory.
- Conducted extensive literature review and analysis of existing research to identify gaps and potential areas of exploration.
- Demonstrated strong problem-solving skills and ability to work in a team environment.

SKILLS

Software Languages: Python, SQL, Unix Shell Scripting, HTML, CSS, JavaScript.
Applications & Databases: MS Office, MySQL, Snowflake.
Advanced Computer Skills: Data Science, Machine Learning, Front end Web development.
Reporting tools: Tableau and Power BI
Methodology: Agile, Waterfall, Scrum
Testing tools: JIRA, HP Quality Center/ALM

CERTIFICATIONS

Artificial Intelligence – Inventateq, Bangalore, India *May 2020*
Data Science – Inventateq, Bangalore, India *March 2021*
Business Analyst – Inventateq, Bangalore, India *Dec 2021*

ACADEMIC PROJECTS

Title: **Graphical analysis using Mathematical equations** Jan 2023 – May 2023

- Developed advanced graph generation techniques based on the research papers "Largely detuned injection-locked semiconductor lasers" and "Labyrinth bifurcations in optically injected diode lasers."
- Demonstrated a comprehensive understanding of complex laser dynamics by studying and extracting key insights from the research papers.
- Acquired proficiency in utilizing scientific software libraries, such as Matplotlib, to generate high-quality graphs, aiding in the understanding and communication of research findings.

Title: **Hands free Kiosk** Aug 2021 – Dec 2021

- Designed and developed a hands-free kiosk using computer vision technology stack consisting of OpenCV, TensorFlow, and Python to devise a way to reduce the spread of infectious diseases by touch.
- Implemented gesture recognition algorithms for hands-free interaction.
- Generated over 500 image data and trained our model with gesture detection accuracy of a minimum 83%. Achieved a 20% increase in customer engagement.

Title: **Post-Covid traffic behavior** Jan 2022 – May 2022

- Designed and implemented a Machine Learning project to detect the traffic behavior post covid around DC area.
- Preprocessed and cleaned the Smartrip and GeoDS data to make it suitable for analysis and performed exploratory data analysis to understand the patterns and trends in the data.
- Trained various algorithms and concluded that DBSCAN clustering model was the best to classify the traffic behavior based on different factors such as time of day, and day of the week.

Title: **Weather Prediction** Aug 2022 – Dec 2022

- Developed a Machine Learning algorithm for predicting the weather using the dataset obtained from US National Oceanic and Atmospheric Administration.
- A Decision tree model, Linear Regression model and a RidgeCV model were developed to predict the next day's precipitation amount with an accuracy of 84 percent.

Title: **Autonomous Solar Vehicle** Jan 2016 – Jun 2016

- During my final year of Bachelors, I designed an autonomous wireless solar based vehicle that employed metal detection and obstacle detection that would enable safer navigation for researchers exploring a new terrain.

AWARDS AND PARTICIPATIONS

- Worked for the Virginia Tech Dining services for a period of one year starting from August 2021 to August 2022 where I understood the value of teamwork, communication, and the importance of resolving customer issues as fast as possible.
- Secured 2nd place in 15th National Level Technical Paper Presentation Event held on 5th November 2015 at Adichunchanagiri Institute of Technology on the paper titled “Graphene Based Plasmonic Nano Antenna”.
- Chairman of Publicity Committee of E-Manthana, 15th National Level Technical Paper Presentation Event held on 5th November 2015 at Adichunchanagiri Institute of Technology.
- Student Coordinator of Membership Committee in E-Manthana, 13th National Level Technical Paper Presentation Event held on 4th April 2014 at Adichunchanagiri Institute of Technology.
- Student Coordinator of Linguistic Committee in E-Manthana, 14th National Level Technical Paper Presentation Event held on 9th April 2015 at Adichunchanagiri Institute of Technology.
- Have presented my Review paper on Nanotechnology at the 11th ISTE Karnataka State Students Convention held at Shirdi Sai Engineering College, Bangalore, India on 30th April 2014.