DHRUV RAO

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EDUCATION

University of Connecticut — **Storrs, CT, USA**
Master of Science in Computer Science and Engineering — *May 2024*
Visvesvaraya Technological University — **Bengaluru, India**
Bachelor of Engineering in Computer Science and Engineering — *August 2021*

SKILLS SUMMARY

Programming Languages:	Python, SQL, JavaScript, C++, Bash, HTML, CSS
Frameworks/Databases:	React.js, TypeScript, NodeJS, Django, MySQL, PostgreSQL, NoSQL, MongoDB
Tools:	Tableau, Power BI, Microsoft Excel, ETL, Alteryx, Git, Jira, WordPress
Libraries:	NumPy, Pandas, Matplotlib, TensorFlow, Keras, Scikit-learn
Methodologies:	Agile, Scrum, SDLC, Waterfall

WORK EXPERIENCE

Data Science Researcher | University of Connecticut — **Jan 2024 - May 2024**

- Processed, cleaned, and analyzed datasets of varying complexity (easy, medium, and hard) totaling over 1M+ records using Python and SQL, addressed missing values to ensure data integrity, created a dashboard for detailed visualizations with Tableau, and carried out data reporting to enhance data-driven decision-making.
- Developed an advanced spatial query algorithm using C++ and Python with a modified closed pair approach under the guidance of the College of Computing's Director & US Census Bureau**,** benefiting decision-making for private and public sectors**.**
- Achieved an accuracy rate of 97% in high-dimensional data analysis, benchmarking against the E2LSH algorithm by Piotr Indyk.

Course Assistant | University of Connecticut — **Jan 2023 - May 2024**

- Collaborated with 2 UConn faculty to enhance the Computer Architecture course, student engagement, and completion rates.
- Held two weekly lab sessions on low-level programming with RARS and hardware implementation using Python libraries, facilitated bi-weekly office hours for student support, mentored over 80+ students, and also engaged in grading.
- Designed various unit test cases using Verilog to implement in Auto Grader for efficient evaluation of student lab programs.

Sales and Marketing Intern | Tech Sells — **Jan 2022**

- Mentored Postgres-based client services and candidate tracking systems to ensure precise data management. Utilized Tableau for advanced reporting and analysis and employed Trello for agile project management reducing project delivery time by 20%.
- Engineered and implemented bash scripts to automate routine operational tasks, achieving a 30% increase in efficiency.

Web Developer Intern | Zerozilla Infotech Private Limited — **Mar 2021 - Apr 2021**

- Designed a real-estate price forecasting tool and SOS feature integrating Agile management practices using Git and Jira to streamline processes and increase productivity by 60%.
- Performed API profiling to identify bottlenecks causing high latency, optimizing performance through cached queries and database indexing by creating workflows in Alteryx. Initiated a location-tracking service using JavaScript and Python, achieving a 20% reduction in API latency to make informed decisions promptly.
- Devised a JavaScript tool to automate client email reporting, improving task visualization through streamlined reporting.

Software Developer Intern | LegalEase Corporate Private Limited — **May 2020 - Jul 2020**

- Contributed to creating the company's official website using the SDLC model for their online presence by tailoring a user-friendly interface with an optimized checkout page involved in both development and deployment also introducing components that refined functionality, facilitating A/B testing for enhancing capabilities that improved system downtime by 33%.
- Maximized SQL for executing database queries, resulting in a significant 40% improvement in data retrieval efficiency by fine-tuning the database configuration and updating the MySQL datasheet, projecting it onto the website.

ACADEMIC PROJECT EXPERIENCE

- **Crypto Trend Analysis:** Programmed data extraction and analysis of five years of historical data for the top 3 cryptocurrencies using Twelvedata APIs, implementing ETL processes to merge, purge, and ensure data quality and consistency. Trained an LSTM recurrent neural network model, achieving an accuracy of 78% in predicting market trends.
- **Loan Approval Prediction**: Spearheaded loan approval advancements by rigorously evaluating and comparing diverse supervised Machine Learning techniques, achieving an 82% accuracy rate. Formulated and deployed a linear model using Scikit-learn to classify loan eligibility, integrating multiple critical factors such as marital status, employment status, age, income, etc.
- **Covid-19 Finder:** Built a high-performance COVID-19 detection website, leveraging Convolutional Neural Networks for image processing, and achieved 93% accuracy by training over 10,000+ sample images. Led the development of a real-time global COVID-19 statistics visualization using React.js and Flask, dynamically displaying key metrics on an interactive world map.