Gagan Raj Singh

GaganRajSingh | gagan-raj-singh | My Site | grsingh@ualberta.ca | Leetcode

Education

2022 - present Master of Science (Computing Science) at **University of Alberta**
2016 - 2020 Bachelor of Engineering (Computer Science) at **Panjab University**

Skills

Programming	C, C++, Python, JavaScript, SQL
Web Development	HTML, CSS, NodeJS, Express, ReactJS
Databases	MySQL, MongoDB, SQLite
Version Control	Github, Azure Devops
Miscellaneous	Linux, Jira, Agile methodology, CI/CD, GraphQL, REST APIs, Scikit-learn

Work Experience

Graduate Research Assistant at University of Alberta Jan 2023 - Present

- Collaborating with a partner company to design and implement a highly efficient market penetration engine that optimizes the process of identifying potential clients.
- Developed and fine-tuned predictive models to output potential client success rates, using Python, Pandas, Scikit-learn, leading to better decision making and business growth.
- Developed a ranking algorithm to compliment the success rate output and identify the top clients.

Associate at Deloitte Aug 2020 - Aug 2022

- Successfully developed user authentication and profile management webpages for 12 websites and 4 apps using JavaScript, jQuery, and NodeJS in an Agile development environment.
- Led the successful migration of more than 4.5 million user records to a new database by developing Python migration scripts, ensuring minimal disruption to business operations and data integrity.
- Implemented Single Sign-On and Multi-Factor Authentication among all websites and apps.

Projects

NFT Marketplace Link

- Designed and developed a user-friendly interface using ReactJS, enabling easy access to generate, mint, buy/sell and track NFT ownership and value.
- Developed and deployed the marketplace smart contract on Goerli testnet, using Solidity and OpenZeppelin, allowing dApps to create, transfer and fetch token information.

Anomaly Detection System Link

- Designed a highly-efficient method to detect anomalies using background subtraction.
- Reduced the anomaly detection time of surveillance videos by up-to 91
- Technologies used: Deep learning, Object detection, Python, PyTorch.

Route Planner

- Computed best possible optimal routes in road networks from a given source to a destination.
- The project helps users with more efficient and accurate route planning for their trips.
- Technologies used: Priority queues, Dijkastra's algorithm, Graphs and Arrays.