SAHIB BIR SINGH BHATIA

MSc Computer Science

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PROFESSIONAL EXPERIENCE

Credera UK Ltd, United Kingdom

Software Engineer   **Period:** April 2022 - Present

1. **Second Client - Drove backend development as a key player in the implementation of a sophisticated data migration system for the finance firm specializing in wealth management, utilizing C# for an efficient console application.**
   - Spearheaded the establishment of comprehensive logging mechanisms using **C#** for the console application, providing valuable insights into system performance and troubleshooting capabilities.
   - Implemented and optimized **GitHub Actions** workflows, ensuring streamlined CI/CD processes for the console application.
   - Orchestrated infrastructure as code (IaC) using **Terraform**, contributing to a robust and scalable system architecture.
   - Designed and implemented data pipelines and batch processes in **Azure DevOps**, enhancing data migration efficiency and accuracy.
2. **First Client - Spearheaded the design and implementation of a cutting-edge React-based application and data visualization platform, empowering traders with actionable insights in the regulated carbon credits market.**
   - Leveraged **TypeScript** for intuitive and interactive visualizations, presenting trends in ETS emissions, price estimates, time spreads and more.
   - Developed and maintained a robust **C# REST API**, ensuring real-time data access, enhancing the user experience.
   - Automated crucial data retrieval and updating tasks with **Python** scripts, reducing manual effort and ensuring a consistently updated database.
   - Established scalable data pipelines in **Azure**, facilitating the gathering of data from various third-party APIs for storage in a centralized data warehouse, ensuring data accuracy and reliability.
   - Engineered **SQL** database tables and views to facilitate data accessibility for the front-end dashboard, supporting accurate data visualization and analysis.

TECHNICAL SKILLS

- **Proficient in**: JavaScript, TypeScript, React,C# .NET, SQL
- **Experienced with**: Terraform, Git,Testing libraries (Jest),Power Apps,Swagger,Firebase
- **UX/UI Design:** Figma,Wireframing, Responsive Design, Cross-Browser Testing
- **Development Practices:** Debugging, Troubleshooting, Agile, TDD, BDD
- **Documentation:** JIRA, Confluence, Azure DevOps Portal
- **Data Engineering:** Python (Extraction, Transform, Load), Azure Data Pipelines
- **API Development:** REST APIs (C# .NET), GraphQL, API Contracts
- **Certification:** HashiCorp Terraform Associate

EDUCATION

- **Master of Science in Computer Science, University of Liverpool, United Kingdom**   **Period:** Jan 2021-Jan 2022

  Modules: Machine and Bio inspired Learning, Neural Networks and Evolutionary Optimization, Applied Algorithms, Data Mining and Visualization, Database Management Systems, Web Programming, Python Programming

  Achievement: First Class with Distinction

INTERNAL COMPANY PROJECTS

Automated Testing Framework Model
- Integrated GPT-4, a large language model, to generate functional **Python** code, specifically tailored for the Pytest package. This helped in creating code that successfully passes unit tests.
- Developed the CI/CD pipeline for the project utilizing **Github Action workflows** and **Terraform.**

Desk Booking Application
- Seamlessly implemented email notifications using **Power Automate**, providing timely updates on desk reservations.
- Innovatively embedded office directions and map views directly within the email notifications for a streamlined user experience.
- Integrated a map view feature into the tool, providing users with a visual representation of the office layout for an improved desk selection process.
- Implemented desk policy notifications for new joiners, ensuring awareness of office policies such as privacy and clean desk guidelines.

PERSONAL PROJECTS

Real Time Chat Application
- Developed a dynamic and responsive real-time chat application using **React**.Leveraged **Firebase's** real-time database capabilities to ensure instantaneous message delivery, promoting efficient and effective communication.
- Integrated **Firebase authentication** to secure user interactions, ensuring privacy and confidentiality within the chat application.
- Implemented features for dynamic chat room creation, allowing users to engage in multiple conversations based on their preferences.

Expense Tracker
- Developed a responsive and user-friendly interface using **React**, ensuring optimal accessibility for efficient expense tracking.
- Utilized .**NET Core** and **SQL** on the backend to seamlessly integrate real-time tracking features, providing immediate and accurate financial insights.

Authentication and Authorisation System
- Engineered a robust authentication and authorization system using **React**, **Nodejs** and **Firebase**, ensuring secure user access to web applications.
- Implemented role-based access control, defining user roles and permissions to manage and restrict application functionalities.

Decentralized NFT Minting Platform
- Designed and developed a decentralized NFT minting platform on WEB3 and Ethereum, incorporating smart contracts for secure transactions using **NextJs**.
- Implemented **GraphQL** for optimized data retrieval, enhancing platform performance and scalability.
- Enhanced user experience through responsive design, **MetaMask authentication**, and integration with **Open Sea** for increased exposure.

Topic Modelling Web Application (Dissertation)
- Applied Latent Dirichlet Allocation (LDA) to process large datasets of product reviews, creating a user-friendly interface using **HTML**, **CSS**, and **React**.
- Designed interactive visualizations to facilitate decision-making for manufacturers, consumers, and product owners.