ADNAN QUISAR

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Education

University of Sussex	**Sep 2020 – May 2024**
BSc Computer Science and Artificial Intelligence (Predicted First-Class Honours)	*Brighton, United Kingdom*

Bachelor's Thesis *Post-Inventory Announcement Forecasting in the Crude Oil Market with Machine Learning*

Experience

University of Sussex	**May 2023 – Sep 2023**
Junior Research Associate	*Brighton, UK*

- Researched correlation between news reporting and market movement, utilising Garman-Klass volatility measurements and natural language processing (NLP) techniques to process the semantics of over 100,000 financial headlines.
- Developed an interactive neural network-driven map that models topic distributions and semantic relationships for deep visual analysis. **accessible here.**
- Engineered a scalable and distributed NLP framework by integrating **Langchain** with a **vector database** to manage OpenAI-generated textual embeddings.
- Trained a **Transformer-based multi-label classifier**, using **Bayesian Optimisation** techniques to achieve **90%** precision for market-relevant news tagging.

Thought Machine	**Jul 2022 – Sep 2022**
Software Engineer Intern (Payments)	*Bloomsbury, UK*

- Built a **Go** library to validate client-configured payment processes using graph theory, decreasing production support queries and saving an estimated **£100,000** annually in operational costs.
- Authored a design document for an error dashboard, proactively collaborating with experts within the department to justify technical trade-offs between Elasticsearch and Prometheus with respect to the system requirements.
- Employed **test-driven development (TDD)** to write comprehensive unit and gRPC service acceptance tests using Go, Protocol Buffers and the Please build system.
- Created an observability dashboard with **Prometheus monitoring** and **Grafana** to gather insight and visualise the types of errors produced when creating payment flows, thereby reducing common validation errors by **40%** through a product feedback loop that refined documentation to target common errors.

FinancialJuice	**Jul 2020 – Dec 2021**
Software Engineer	*Remote*

- Independently delivered a project that aggregates and evaluates financial articles with similar linguistic structure using machine learning and NLP techniques. Included creating a **novel Jaro-Winkler algorithm** for similarity measurement.
- Implemented a dynamic trending topics feature using advanced text analysis techniques. This was used internally by analysts and resulted in a **25% increase** in daily headline output.
- Crafted dynamic web applications with jQuery and ASP.NET (C# & VB.NET), using Azure DevOps for version control.

Tradeviews	**Dec 2018 – Aug 2020**
Junior Software Engineer	*Horley, UK*

- Automated web data extraction and transformation using Python. Expanded data source diversity by **150%** and facilitated efficient CSV, JSON and XSLX integration for clients.
- Generated & modified data sets via Microsoft Excel tools and VBA Code. Due to the new influx in informative cargo tradeflow data, we were able to secure **4 new major clients**.

Projects

Trading Copier Bot | Read More | *Python, SQL, Time Series, Asynchronous Programming, WebSockets*   **Dec 2022**
- Algorithmic trading project that extracted market trading signals from messaging platforms using regex and converted them into actionable trades. The framework also facilitated backtesting and generated metric reports for signal providers.

Extracurricular

Teaching Assistant (2023) & Peer Assisted Learning Tutor (2022)	**Sep 2022 – Present**
HackSussex Society Vice President (2023) & Lead Web Developer (2021)	**Sep 2021 – Mar 2024**
ICHack 23 (Imperial College Hackathon) Runner Up	**Feb 2023**
Showcode Level-Up Society Hackathon Runner Up	**Jul 2021**

Skills

Languages: Python, Go, C++, C#, C, Java, VBA, VB.NET
Technologies: React, Node.js, Linux, AWS, jQuery, LaTeX, Git, Pentaho, MySQL, Microsoft SQL Server, Bootstrap
Applications: Microsoft Excel, Notion, Atlassian, Jira, Netlify