Triumph kia teh

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Education

Dartmouth College | Hanover, NH **June 2026**

B.A. Computer Science and Mathematics

Courses: Data Structures & Algorithms, Machine Learning, Software Design, Security and Privacy, Theory of Computation, Numerical Methods in Computation, Scientific Computing, Game Theory, Probability, Statistics, Linear Algebra, Differential Eqns.
Scholarship/Awards: Davis Scholar (2025), King Scholar (2022-2026), Rufus Choate Scholar (2023), Emerging Leader Award (2023)
Leadership: Resident Advisor, Teaching Assistant, Orientation Leader, Admissions Ambassador

Certificates

MIT Data Science & Machine Learning Program (May-Sept. 2024) – mygreatlearning.com/certificate/EDPGAWFG

Skills

Programming & Tools: Java, Python, Git, Jupyter, Streamlit, React, Vite, HTML, CSS, JavaScript, SQL (in progress), AWS (familiar)
Software Development: API Integration (REST, JSON), Unit Testing, Software Maintenance, Refactoring, Client-Server
Web & UI Development: Responsive Design, DOM Manipulation, Event Handling
Machine Learning & Data: Scikit-learn, TensorFlow, PyTorch, Data Visualization (Matplotlib, Seaborn, Pandas)

Projects

Collaborative Graphical Editor | Java, Multithreading, Network Programming, GUI Development |

- Developed a real-time collaborative graphical editor, enabling multi-user editing over a network.
- Implemented a **multi-threaded server** (SketchServer) to manage concurrent users and synchronize updates.
- Designed efficient message-passing protocols, ensuring seamless drawing, recoloring, and shape manipulation.
- Optimized thread-safe operations, preventing race conditions and ensuring consistent client-server synchronization.
- Maintained **detailed technical documentation**, outlining software architecture, data structures, and protocol flow.

Stock Data & News Sentiment Web App | Python, Streamlit, API Integration, Google Cloud | Deployed Web Ap

- Developed a real-time dashboard that fetches stock data (**yFinance API)** and performs sentiment analysis on financial news using Hugging Face Transformers.
- Designed an interactive UI with Streamlit, enabling users to explore stock trends and market sentiment dynamically.
- Integrated real-time monitoring, implementing caching mechanisms and optimizing API calls for efficiency.
- Ensured scalability by preparing data pipelines for Google Cloud deployment, improving real-time responsiveness.
- Maintained version control with Git, documenting API integration & technical dependencies.

Amazon Product Recommendation System | Python, Scikit-learn, Collaborative Filtering, Cloud Scalability |

- Created a data-driven recommendation engine (**~7.8M record**s) using KNN, SVD, and GridSearchCV.
- Designed predictive models for customer behavior, aligning with financial AI applications in asset management.
- Implemented cloud-scalable ML pipelines, ensuring efficient & scalable AI deployment.
- Applied statistical modeling techniques, relevant for financial market analysis & predictive insights.

Hospital Length of Stay (LOS) Prediction & Model Deployment | Python, Scikit-learn, ML Pipelines, Data Engineering |

- Developed a predictive analytics model using **500,000+ hospital records**, showcasing risk forecasting expertise.
- Built machine learning pipelines, preparing data for structured decision-making and financial planning.
- Serialized a Random Forest Regressor with Pickle & Joblib, optimizing real-time predictions.
- Applied time-series modeling techniques, similar to those used in financial forecasting & asset risk assessment.

Experience

Dartmouth Pauls Math Lab | Hanover, NH **Dec. 2023-Jun. 2024**

Research Assistant

- Analyzed **150+ hours of neural video and signal recordings** to study mice circadian rhythms, identifying age-related neural variations affecting biological cycles and contributing to research on neural degeneration.
- Applied **MATLAB-based statistical modeling** to preprocess signals, **reduce noise by ~20%,** and extract key circadian biomarkers across diverse age groups, supporting computational health modeling.