ASHUTOSH RUDRAKSH

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Education

Ohio State University **Sep. 2023 – May 2025**
Masters in Computer Science and Engineering *Columbus, Ohio*

Relevant Coursework

- LLMs Limitation and capabilities-(Red-teaming)
- Programming Languages
- Algorithms Design and Analysis
- Interm: Database Management
- Advance Artificial Intelligence
- SWE Eng in AI Systems
- Data Visualization
- Computer Vision

Experience

Wexner Medical Center **May 2024– August 2024**
Software Research Intern - AI *Columbus, Ohio*

- Conducted literature reviews on 15 pregnancy-related conditions, utilizing databases such as ClinicalTrail.gov, PubMed, Embase, and Cochrane Library to collect pertinent drug information.
- Developed Structured Data by incorporating scripts using Python for web scraping and Natural Language Processing(NLP) techniques, including Named Entity Recognition(NER) and relation extraction, to organize drug indications and targets associated with pregnancy-related diseases.
- Performed statistical analyses using SPSS software to interpret collected data, applying independent samples t-tests and Mann-Whitney U-tests to assess significance, thereby enhancing the reliability of research findings.
- Utilized Large Language Model (LLM) APIs, such as Llama, GPT, and Grok, to process and analyze extensive web-based medical literature, enabling the extraction of complex drug-disease relationships and contributing to the development of a comprehensive database for pregnancy-related pharmacological research.

Tata Consultancy Services Ion **May 2022 – August 2022**
Software Developer Intern *Pune, Maharashtra*

- Assisted in development of the front end of a mobile application for iOS/Android using Dart and the Flutter framework.
- Worked with Google Firebase to manage user inputted data across multiple platforms including web and mobile apps.
- Collaborated with team members using version control systems such as Git to organize modifications and assign tasks.

Projects

NavAI App | *Python, Computer vision, LLMs, NLP* **January 2021**

- Built a real-time navigation app for visually impaired individuals using Python, YOLOv8, and OpenCV.
- Integrated an LLM API to convert object data into human-understandable navigation instructions.
- Utilized Google Text-to-Speech (gTTS) to provide real-time spoken navigation guidance.
- Built an accessible and cost-effective solution for mobile devices.

YouTube Clone Application | *TypeScript, Next.js, Express.js, Docker, firebase, FFmpeg, GCS* **November 2020**

- Built a YouTube clone using Next.js with TypeScript for a responsive and SEO-friendly frontend.
- Created backend APIs using Express.js running in Docker containers for scalability.
- Integrated Firebase Auth, Firestore, and Functions for user authentication, data storage, and serverless backend logic.

Real-time Algorithmic Trading App | *Python, React Native, IEX cloud API* **October 2020**

- Developed a real-time algorithmic trading application using Python and React Native, integrating the IEX Cloud API to provide users with up-to-date market data and seamless trading experiences.
- Implemented advanced trading algorithms and user-friendly interfaces, enhancing decision-making processes and improving overall user engagement within the application.

Technical Skills

Languages: Python, Java, HTML/CSS, JavaScript, TypeScript, SQL
Developer Tools: VS code, Cursor, AWS, Google Cloud Platform, Docker, Kubernetes
Technologies/Frameworks: PyTorch, Linux, React Native, Flask, Django, Github

Leadership / Extracurricular

Innovation Club **Spring 2021 – Present**
President *SPPU Pune*

- Innovate TechFest Lead Organizer Award 2022: Recognized for leading efforts to foster tech community engagement.