SALAH SALAH

Canadian Citizen | @ s.salahs1e@gmail.com | ⦿ github.com/salahs2 | ⊕ salahs2.github.io/3d-website/

EDUCATION

McMaster University   Hamilton, Ontario
*BSc. in Honours Math & Computer Science | **GPA: 3.3 / 4.0***   *December 2024*
Relevant coursework: Applications of Machine Learning, Object-Oriented Programming in Java, Algorithms & Complexity, Statistical Methods & Applications, Mathematical Statistics, Advanced Probability Theory

SKILLS

Languages: C++ | Java | Python | SQL | SAS | R | JavaScript | TypeScript | HTML | CSS

Technologies: Node.js | Next.js | Vue.js | Express.js | React | React Native | Git | PostgreSQL | MongoDB | Docker | Firebase | Google Cloud Platform | Pandas | Seaborn | Dash | Jupyter Hub | Docker

EXPERIENCE

Statistical Research Assistant   Jun 2023 − Dec 2023
McMaster University Hospital - Health Research, Evidence, and Impact   *Hamilton, Ontario*
- Analyzed health data with over 100,000 columns to assess occupational health risks in specific demographic groups
- Deployed a match-back algorithm in **R** using ISCO2008 job code classification, automating the manual data cleaning and categorization process, and achieving a **70%** accuracy in matching job roles to standardized codes
- Implemented a Levenshtein distance algorithm using **Python** & **PostgreSQL** to optimize data duplication, reducing unique columns by **50%**, from over **16,000** to **8,000**, significantly streamlining the dataset for analysis

Software Engineering Co-op   May 2023 − Dec 2023
McMaster University   *Hamilton, Ontario*
- Created Front End UI of Test Database software using **TypeScript** to create **React** Components
- Deployed early version of the product as a desktop application using **Electron.js** managing user accessibility interactions & authentication using **Google Cloud's Firebase**
- Conducted statistical analyses in **R** on student evaluations, assessing course difficulty. Scenario analysis of grading schemes led to a 3–4% average grade improvement, from 69% to 73% in the following term

Private Equity Intern   May 2022 − Aug 2022
Healthcare Of Ontario Pension Plan   *Toronto, Ontario*
- Utilized **Bloomberg** API with **Python** to retrieve and analyze private equity fund performance data, conducting advanced screens to benchmark portfolio returns against average market performance

Quantitative Risk Engineer Intern   Jan 2022 − Apr 2022
Fidelity Asset Management   *Toronto, Ontario*
- Engineered system using Microsoft **Power Automate** SaaS Platform, **Python**, and **HTTPX** to scrape news articles for risk-related keywords, reducing monitoring time and enhancing risk detection for global events.
- Assisted with a published thesis on sector-specific model indicators to support Portfolio Manager decision-making
- **Built a Python-based dashboard** using **Dash**, **NumPy**, **Matplotlib**, **Plotly**, and **Pandas** displaying statistical information on proprietary models including indexing, normalization, optimization & significance results

PROJECTS

NBA Rookie of The Year Dashboard ⦿ | github.com/salahs2/NBA-RoTY-Dashboard
- Developed and implemented an end-to-end machine learning pipeline using **Sci-kit Learn's** Random Forest Classifier to predict the NBA Rookie of the Year, achieving an accuracy score of **95%**.
- Automated the loading and presentation of performance metrics by scraping NBA rookie draft data using **BeautifulSoup** and **HTTP Requests** processing data from CSV files into a consolidated **Pandas** DataFrame

Catflix ⦿ | github.com/salahs2/Catflix
- Designed and implemented a full-stack Netflix clone **MongoDB**, **Express.js**, **React** and **Node.js**.
- Developed **RESTful APIs** for media content using an open source movie database and managed user authentication optimizing database queries with **MongoDB** for fast and reliable performance.