Maanav Garg

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Education

McMaster University — Hamilton, Ontario
B.A.Sc. Honours Computer Science, minor in Management - GPA: 3.9/4.0 — September 2017 - April 2022

Work Experience

IBM — Markham, Ontario
Software Developer & Technical Analyst Intern — May 2018 - August 2019

- Consulted and developed client-side for TD, National Bank, HSBC and Desjardins by working on 21 distinct projects, utilizing Java and Python
- Performed an extensive 26-hour analysis to redesign TD's stock processing server, by examining the servers current status, and cross-referencing it with 9 viable options, leading to an increase in orders-processed per second by 100% (600,000)
- Designed a 2-part solution for National Bank using Java, which consisted of restructuring their current system and implementing a backup cloud that allowed an automatic dispatch of data to any location, while eliminating security and capacity issues
- Improved and streamlined an internal unit-testing process by 19% (6hr), by designing a Python script that automates the construction of user test cases and connects and extracts order information for a real-time database
- During tenure, I volunteered as FutureBlue lead, where I trained a 16-member team, to organize 44 'Career and Development' events, including workshops, case competitions and professional keynotes catered towards IBM interns within the fields of consulting, finance, sales and technology

Faculty of Computing & Software, McMaster University — Hamilton, Ontario
Research Assistant — January 2019 - Present

- Initiated a new research project using Elm and Haskell, alongside Dr. Anand, which focused on computational 'algebraic thinking'
- Developed 14 quantitative models of gradient waveforms, based on Dr. Anand's recent research on 'MRI', by analyzing gathered data, and assembling appropriate graphs and models
- Led a 6-member team to manage and organize the OutReach initiative at 5 local secondary schools, with the intent to spread awareness in programming, resulting in a 8% increase in 'Computer Science' applications at McMaster from targeted regions
- Developed 6 games, using Elm and Haskell, that implemented game design principles and taught over 300 students the basics of programming

Extra-Curricular Involvement

DeltaHacks - Faculty of Engineering, McMaster University — Hamilton, Ontario
Vice President, Sponsorship — May 2019 - Present

- Directed a cross-functional executive team (8 members) to obtain funding from 20 sponsorship sources of $105,000, yielding a year-over-year, 31% increase in funds, a 25% surge in company interest and a 12% improvement in sponsor retention
- Formalized a comprehensive design of the sponsorship packaging strategy, that amplified our offered opportunities by illustrating quantified statistics of our event, highlighting popular and attractive perks, and offering the freedom of customization to suit the companies needs
- Created and managed the 'Campus Ambassador' program across North American universities, which successfully increased the number of conference applicants by 15% (~2,100) within 5 months
- Negotiated with sponsors, by utilizing year-over-year metrics, to create compelling statistical analysis, resulting in a 12% increase in funding

Microsoft — Hamilton, Ontario
Student Partner - McMaster University — September 2019 - Present

- Organized 10 Microsoft focussed 'Career and Development' events throughout the school year including workshops, case competitions and professional keynotes catered towards McMaster Student within the fields of technology, development, project management and business operations
- Managed the Events, Finance, Logistics, Marketing and Relations portfolios, by designing weekly action plans, conducting daily promotional initiatives, leasing between McMaster administration and framing together the term-by-term budget
- Hosted a range of technical workshops on Microsoft technologies (Azure, AI and Machine Learning Cognitive Services, etc.) that entailed me to design and teach the content

Mathematical Investment Research Council — Hamilton, Ontario
Research Analyst — September 2019 - Present

- Implemented and presented quantitive trading strategies by designing mock-ups of mathematical models using Python and machine learning techniques, while focusing on time series strategies, future/ETF arbitrage, and cross-sectional strategies
- Created valuations to analyze current market data, provide financial analysis and support industry research to develop formal financial documentation

Technical Experience

Experience working with **Python, JavaScript, HTML, CSS, Java, Haskell** and **Elm**
Tools and Technologies: **React, Django, Flask, Angular, Node.js, jQuery, Git, Azure** and **Google Cloud**

NBA Rookie Statistics Predictor — https://github.com/Maanav-G/NBA-rookie-statistics-analysis

- A machine learning model that predicts the statistics of the NBA's 2019-2020 season rookies

Recommendation Engine — https://github.com/Maanav-G/Recommendation-Engine

- A model that recommends the user a similar set of movies based on the inputted movie title