NATHAN ESAU

Software Developer in Toronto Area

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EXPERIENCE

Software Developer (C++)

Moody's Analytics

📅 June 2017 – Present   📍 Toronto, ON

- Helped maintain AXIS, a widely used actuarial software
- Worked with 100+ programmers helping add requested features, refactoring code, regression testing, fixing bugs
- Designed algorithms for numerical integration, stochastic simulations and valuing financial securities
- Added new interface elements such as financial reports and wrote database code for the application

Software Developer Intern (C++)

Moody's Analytics

📅 Jan 2016 - Aug 2016   📍 Toronto, ON

Research Intern

Simon Fraser University

📅 May 2015 - Aug 2015   📍 Burnaby, BC

- Researched and evaluated various pension plan designs
- Programmed an economic scenario generator using a VAR(1) time series model
- Ported Excel Macros into R programming language

Statistics Intern

Statistics Canada

📅 Jan 2015 - Apr 2015   📍 Ottawa, ON

SKILLS

- Able to Analyze, Design and Implement Data Structures
- Able to Write Clear and Detailed Specifications and Documentation
- Experience Using Source Control
- Experience Working on Large Software Projects
- Experience With Object Oriented Programming
- Working Experience of C, C++

EDUCATION

B.S. in Actuarial Science

Simon Fraser University

📅 Sep 2012 – Apr 2017   📍 Burnaby, BC

- Actuarial science is a blend of mathematics, statistics, finance, economics and computer science.
- Obtained ASA crediential in 2018.

PROJECTS

Fantasy Tennis (Python)

⌂ nathanesau/FantasyTennis

- Draw Editor for Men's Tennis. Scrapes data from ATP website. Allows user to make predictions on match outcomes.

Rook Card Game (C++)

⌂ nathanesau/RookGame

- Implementation of Hasbro's Rook card game in C++. Qt used for interface. Allows user to play against AI players.

Machine Learning Project (R)

⌂ nathanesau/ukencompetition

- Applied ML (random forest, gradient boost) to predict mobile app revenue.

Q-Learning TicTacToe (Python)

⌂ nathanesau/TicTacToeRL

- Uses reinforcement learning to train AI to play Tic Tac Toe perfectly.

LANGUAGES

C++
Python
R
Java