
SHREYAS NAIK

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Fresh Graduate from the University of British Columbia with a passion in a Machine Learning looking for an opportunity to apply my skills and grow.

Education

Sept 2017 - April 2021 Bachelor of Science
University of British Columbia
Computer Science Major

Technical Expertise

Languages: Python, Java, C++, C, Haskell, Prolog, MATLAB, JavaScript, Bash, Assembly, TypeScript

Other Technologies: Unix, IntelliJ, Git, Sublime Text, Vim, JSON

Important Courses

- CPSC 440: Advanced Machine Learning
- CPSC 422: Intelligent Systems
- CPSC 330: Applied Machine Learning
- CPSC 322: Introduction to Artificial Intelligence
- CPSC 425: Computer Vision
- CPSC 340: Machine Learning and Data Mining
- CPSC 312: Functional and Logic Programming
- CPSC 302: Numerical Comp for Algebraic Problems

Projects

Undirected Graphical Models - Academic

March 2021 - April 2021

- Worked with two other students to give a comprehensive lecture on Undirected Graphical Models on the level of Graduate students. Worked on various topics including pairwise UGMs and possible applications (Ising models or horizontal gene transfer in Bacteria), exact interference approximate inference, computation of MLE and MAP parameters and their NP-completeness to name a few.
- Lecture to be on the level of a Graduate Student's understanding of Machine Learning. Delivered during the final exam session and so but received a score of 94%.

Julia, Machine Learning with UGM applications in: Bayes, Gaussians, MAP, MLE, MNIST, Deep Learning, and Classifiers

Cibttelt - Personal

April 2019 - August 2019

- Developed my own programming language in Python. Designed to imitate BASIC language. Developed an Abstract Syntax Tree with different types of nodes (such as Function nodes, Variable nodes, and Number nodes).
- Developed in Python 3 and uses the terminal for coding. It is an interpreted language instead of a compiled language. Has its own Lexer, Parser, Interpreter, Tokens with the datatypes and their handling, and Error handling.
- Has its own Lexer with the usual datatypes, Parser which constructs the abstract syntax tree, and Interpreter which deconstructs the syntax tree into results. It has its own types of error messages. It has Runtime Errors, Syntax Errors, Invalid Character Errors, and Expected Character Errors.

Python and Unix

Crusher - Academic

Oct 2018

- Developed a game called The Crusher. Similar to Checkers, the aim of the game is to 'stomp' the other player's pieces. User inputs a specific board size they wish to play with.
- Created an AI, which uses heuristics, as well which made logical decisions to defeat its opponents. The AI calculates its odds of winning with every move and accordingly chooses the better move. It remembers its losses by remembering previous moves and accordingly makes decisions.
- Successfully used concepts of parallel processing in using it in order to make the game fast.

Haskell and Unix

- Participated in a Hackathon (iNTUtion 2016, Nanyang Technology University) during high-school. Developed an application part of the project. Inspired by LastPass. First place in the University-level Hackathon out of 100+ competitors. Scouted for employment.
- The phone application is written in Java, for Android. It stores the encrypted password and sends it back through to the server, and back to the web extension. Mainly focused on Java. Used Android Studio (IDE) and XML for the layout of the application.

Java, XML, Android Studio

Work experience

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| Jan 2020 - Aug 2020 | <p>Software Developer Intern</p> <p><i>Ballard Power Systems</i></p> <p>Improved the code efficiency in MATLAB. As a result, the program ran three times faster and saved a lot of time which was of essence for my team. Improved code accuracy which is of vital importance when it comes to carbon plates in a fuel cell. Carbon plates tend to lose a lot of energy in heat so improving the energy transfer efficiency between carbon plates meant better fuel cells and improved technology</p> |
| Jan 2019 - Aug 2019 | <p>Teaching Assistant for CPSC 213</p> <p><i>University of British Columbia</i></p> <p>Was a teaching assistant for an introductory course to computer architecture, Computer Science 213 - Introduction to Computer Systems. Helped students understand foundations of concepts behind software architecture, operating systems, and I/O architectures. Synchronous programming involving topics such as critical sections, deadlock avoidance, and performance principles and operation of disks and networks were also taught in this course.</p> |
| Sept 2018 - Dec 2018 | <p>Teaching Assistant for CPSC 110, Fall Session</p> <p><i>University of British Columbia</i></p> <p>Was a teaching assistant for an introductory course, Computer Science 110 - Computation, Programs, and Programming. Helped students understand fundamental programming techniques and computation structures.</p> |

Technical Extracurriculars

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| Oct 2016 | <p>iNTUtion Hackathon</p> <p><i>Nanyang Technological University, Singapore</i></p> <p>Received first place for a hackathon in Singapore which was conducted by Nanyang Technological University. Worked in a team with to code an application which works on information security. The application was named TrueID.</p> |
| 2015 | <p>National Software Competition</p> <p><i>Singapore Polytechnic, School of Computing</i></p> <p>Participated in a competition held on a national level. Created an application which aimed to reduce food wastage by connecting producers and consumers and thereby allowing producers to sell food faster. By doing this, perishable foods could be sold before their expiry date at a discounted price enabling a lesser amount of food wasted.</p> |
| 2017 | <p>Footballer of the Year</p> <p><i>National Public School International, Singapore</i></p> <p>Amongst many other accolades, received footballer of the year award. Was a captain for the school team on several seasons and short tournaments. Won the first medal for the school for the Under-19 School team.</p> |