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OBJECTIVE

To obtain a professional full-time position to work as a web or cloud-based software/application developer, entry-level systems administrator (Linux DevOps) or software engineer.

EDUCATION

University of Toronto, St. George Campus   September 2015 - June 2019

Honours Bachelor of Science, *new graduate*

Specialist in Computer Science and Minor in Mathematics

Focus in Machine Learning and Computer Vision

- **cGPA: 3.95 / 4.0**
- **Honors & Awards: Dean's List Scholar in Faculty of Arts and Science (2015, 2016, 2017, 2018, 2019)**
- **Scholarships: Mc Nab Undergraduate Scholarship ($1000)**
- Relevant Courses:
    - Data Structures and Analysis (CSC263), Intro to Software Engineering (CSC301)
    - Intro to Visual Computing (CSC320), Intro to Image Understanding (CSC420)
    - Intro to Neural Networks and Machine Learning (CSC321), Machine Learning and Data Mining (CSC411), Probabilistic Learning and Reasoning (CSC412)

EMPLOYMENT EXPERIENCE

Teaching Assistant, Department of Computer and Mathematical Sciences   May 2019 - Present

CSCB09 | Responsibilities: Tutoring and Marking   *University of Toronto Scarborough*

- Delivered live coding demo and gave students constructive feedbacks.

Course Instructor, Easy 4.0 Education Inc.   May 2018 - Present

Linux Programming | Responsibilities: Designing Course and Tutoring   *Toronto, ON, Canada*

Teaching Assistant, Department of Mathematics   September 2018 - April 2019

MAT135/136 | Responsibilities: Tutoring and Marking   *University of Toronto*

- Presented problem solving strategies and assessed group presentations during tutorial.
- Facilitated student learning by guiding them through Applied Communication Tasks.

TECHNICAL SKILLS

Programming Languages	Proficient in Python, C and Java;
	Experience in NodeJS, JavaScript, SQL, MATLAB, R, Verilog
Essential Libs & Packages	NumPy, OpenCV, PyTorch, Matplotlib, pthread.h, Express.js
SCM (or VCS)	SVN, Git(Hub) ⭘ https://github.com/jellycsc/
Databases	MongoDB, PostgreSQL, MySQL, Firebase
Operating Systems	macOS, Ubuntu, CentOS, Microsoft Windows, Raspbian, OpenWrt
Document Preparation System	LaTeX, Microsoft Office
Robot Related Programming	easyC V4, ROBOTC, PROS (Purdue Robotics Operating System)

PROJECTS

JellyBlog and JellyGist (Jekyll and GitBook + Travis CI)   2019 Winter
Individual Project, ⭕ `jellycsc/JellyBlog-Travis-CI` ⭕ `jellycsc/JellyGist-Travis-CI` *Home*
- Tested and deployed automatically using Travis CI custom scripts. See Personal Interests for details.

Image Colorization with Convolutional Neural Networks (Python + PyTorch)   2018 Winter
Individual, CSC321: Intro to Neural Networks and Machine Learning   *University of Toronto*
○ Keywords: CIFAR-10, U-Net (Skip Connections), Dilated Convolution
- Trained, and analyzed the performance of CNN. Performed debugging by visualizing intermediate activations.

The PatchMatch Algorithm (Python + NumPy + OpenCV)   2018 Winter
Individual, CSC320: Intro to Visual Computing   *University of Toronto*
- Improved efficiency of the algorithm introduced in original `paper` without compromising image quality.

Multi-Agent Pacman Game (Python)   2018 Winter
Individual, CSC384: Intro to Artificial Intelligence   *University of Toronto*
○ Keywords: DFS, BFS, A^* Search, Minimax, Expectimax, Alpha-Beta Pruning
- Analyzed both heuristic search and uninformed search algorithms, and implemented multi-agent models.

Traffic Intersection Monitoring and Guidance System (C)   2017 Fall
Team Leader, CSC369: Operating Systems   *University of Toronto*
- Learned how to work with synchronization primitives in C and avoid potential deadlocks.

EXT2 File System (C)   2017 Fall
Team Leader, CSC369: Operating Systems   *University of Toronto*
- Implemented raw EXT2 File System in Ubuntu and practiced manipulating binary data in C

File Synchronization Over Socket (C) ⭕ `jellycsc/file-sync-over-socket`   2017 Winter
Team Leader, CSC209: Software Tools and Systems Programming   *University of Toronto*
- Developed multitasking server to handle multiple clients transferring files simultaneously using sockets.

Photo Renamer GUI (Java + JFrame) ⭕ `jellycsc/PhotoRenamer`   2016 Fall
Team Leader, CSC207: Software Design   *University of Toronto*
○ Intro: Preview, rename, and add tags to a photo. It serializes user history and keeps logs at the same time.
- Enhanced team work efficiency by using git version control system.

Automated Puzzle Solving Program (Python) ⭕ `jellycsc/BFS-DFS-puzzle-solving`   2016 Winter
Individual, CSC148: Intro to Computer Science   *University of Toronto*
- Managed to efficiently solve several kinds of puzzles using BFS and DFS searching algorithms.

Uber Ride-sharing Simulation (Python) ⭕ `Uber-ride-sharing-simulation`   2016 Winter
Individual, CSC148: Intro to Computer Science   *University of Toronto*
- Built models to simulate ride-sharing reality, and estimated average waiting time for every customer

Playing Card Based Encryption & Decryption Algorithm (Python) ⭕ `encryption-algo`   2015 Fall
Individual, CSC108: Intro to Computer Programming   *University of Toronto*
- Combined the randomness in playing cards with encryption, and achieved basic security functionality

VOLUNTEER AND EXTRA-CURRICULAR ACTIVITIES

Math Orientation Volunteer   2016 Fall
Department of Mathematics   *University of Toronto*
- Motivated first year newly admitted students and shared my own experience & study tips.

VEX Robotics Competition Referee   2016 Winter
iDesign Central Toronto VRC Qualifying Event, VEX Robotics   *St. Michael's College School*
- Enforced VRC rules and ensured the normal progress of the game.

AFFILIATIONS AND MEMBERSHIPS

Translator & Proofreader, JueJin Translation Project ⏻ xitu/gold-miner   2018 Winter - Present
Tech Department Leader, UTFAQ Club 🌐 https://utfaq.com/   2017 Fall - Present
Member, University of Toronto Application Development Association Club   2017 Fall - Present
Mentor, Woodsworth Summer E-Mentorship Program, Woodsworth College, U of T   2017 Summer
Mentor, Peer Academic Support, Department of Mathematics, U of T   2016 Fall
Mentee, iConnect International Mentorship Program, CIE, U of T   2015 Summer

PERSONAL INTERESTS

Sports: Playing basketball and Cycling.
Miscellaneous:
↪ Maintaining a `website` and several Linux Virtual Private Servers for offering SOCKS5 proxy services.
↪ Writing Jekyll tech blogs. 🌐 https://nichenjie.com/
↪ Making easy-to-understand tutorials using GitBook. 🌐 https://gist.nichenjie.com/
↪ Performed component-level repairs on iPhone 4S, 5S and 6S. Thanks to `iFixit`.