

# Jake J. Choi

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## Objective and Skills

### Software Engineer | Software Developer

Specialized in System, Network, Artificial Intelligence, Machine Learning

- Assembly Language (AT&T)
- System Prog. (Linux & \*nix)
- Data Communications
- SQL (MSSQL, MySQL)
- VCS (Git, SourceTree)
- CI Tools (Jenkins, Travis CI)
- Agile, Scrum Framework
- Data Analysis (R, Python)
- C, C++, CMake
- Net / Socket Programming
- TCP/IP, Switching, Routing
- NoSQL (MongoDB)
- Virtualization (VMWare)
- Cloud Computing (AWS)
- Test Automation (Selenium)
- Tensorflow, OpenAI
- Python, Pandas, Scikit
- Arduino Development
- Linux Administration
- Data Types (XML, JSON)
- Containerization (Docker)
- Object-Oriented Analysis
- Bash Script Programming
- Microsoft Azure ML Studio

## Experiences

### Student Research Assistant

BCIT (Supervisor: Mirela Gutica) | Burnaby, BC

Jun. 2018 – Aug. 2018

- Performed a quantitative data analysis and multinomial logistic regression on the subject “Building Advanced Learning Technologies for Improving Minority’s Participation in STEM” by using R and RStudio.
- Investigated various machine learning algorithms (Logistic Regression, SVM, Random Forest, Bayesian Network, Decision Tree, Naive Bayes, Neural Network, K-Nearest Neighbor, and Adaptive Boosting) to predict possible career choices based on the favorite activities of one’s childhood.

### Junior QA Automation Developer (Co-op)

Absolute Software | Vancouver, BC

May. 2017 – Dec. 2017

- Developed and maintained middle-tier test scripts for Restful APIs and database transactions by using MSSQL (MS SQL Server Developer), MongoDB (MongoChef), and SoupUI.
- Developed a Chrome extension that matches and highlights the elements on a page with XPath interactively to improve the productivity of web UI test automation.
- Developed and maintained a Java-based end-to-end testing framework by using Java Spring, TestNG, Selenium, Appium, and Android Debug Bridge for an Android-based data security solution.

## Education and Training

### Computer Systems Technology Diploma Program

Graduated with Distinction

(Artificial Intelligence/Machine Learning Option)

British Columbia Institute of Technology | Burnaby, BC

Cumulative GPA: 95/100

*Centerprise Information Solutions Academic Award Recipient (Nov. 2018)*

## Projects

### 1<sup>st</sup> Prize: Auto Insurance Claim Data Science In-Class Competition | BCIT | Burnaby, BC

- Designed and developed a custom data analysis framework to predict the future claim amount based on customer's attributes and past behaviors by using R, Python, Tensorflow, Pandas, Scikit, and XGBoost.

### Tanks on Fire: A Web-Based Real-Time Shooting Tank Game | BCIT | Burnaby, BC

- Developed an online two-player shooting arcade tank game by using HTML, HTML5 Canvas, CSS, Javascript, and Socket.io the web socket library.

### BambooShoot: A Web-Based Career Management Solution | BCIT | Burnaby, BC

- Designed and developed a mobile-friendly online career management system for a customer who is a communication instructor at BCIT by using Vue.js, Node.js, express.js, MongoDB, and Mongoose.

### AIAbalone: Artificial Intelligence Game Playing Agent | BCIT | Burnaby, BC

- Designed and developed an Abalone game implementation and an AI game playing agent which uses various state-space search techniques such as Minimax with alpha-beta pruning, transposition caching, and move ordering in a distributed environment by using Python, Pypy, Pygame, and Thorpy.

### Bitcoin Casino: Cryptocurrency Investment Simulator | BCIT | Burnaby, BC

- Developed an Android application that enables users to virtually invest in cryptocurrencies by providing real-time price indices, price history charts, and cryptocurrency news.

<https://play.google.com/store/apps/details?id=com.comp3617.finalproject>

### The Cosmic Flow: A Visual-Auditory Interpretation of Body Movement | Private Project

- Developed an interactive real-time image-sound generator by using Processing language and a motion sensor (Microsoft Kinect) to build an art project which interprets the user's movement into an animation and improvised jazz music.

## Outside Interests

### BCIT Student Association Peak Leadership Program | BCIT SA | Burnaby, BC

- Completed learning and enhancing leadership skills, professional development skills, and communication skills through workshops and hands-on activities.