## Jake J. Choi

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## Summary and Skills

# Software Engineer | Software Developer

Specialized in System, Network, Artificial Intelligence, Machine Learning

- Assembly Language (AT&T)

- O Network Security Admin
- O Data Analysis (R, Python)
- RESTful (SoupUI, Postman)
- VCS (Git, SourceTree)
- Testing Methodologies

- Windows Dev: Win32 API, MFC, WPF C, C++, C#, Java, Python
- System Programming (Linux) Data Comm/Network Programming
  - o MSSQL (SQL), MongoDB (NoSQL)

  - o Tensorflow, OpenAI Framework
  - Virtualization (VMWare, Docker)
  - O OOP Analysis / Design Pattern
  - Test Automation (TestNG, Selenium)
    Data Types (XML, JSON)

- Unified Modeling Language
- o HTML5, CSS, Javascript, PHP o TCP/IP, NAT, VPN, Switching, Routing o Android Dev (ADB, Appium)
  - Firewall (Sophos UTM)
  - o MS Azure ML Studio
  - o Agile, Scrum Framework
  - Project MGMT. (Jira, qTest)

### Experiences

Student Research Assistant | BCIT (Supervisor: Mirela Gutica) | Burnaby, BC Jun. 2018 - Aug. 2018

- o 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.
- o 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

- o 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.
- o Developed and maintained middle-tier test scripts for Restful APIs and database transactions by using MSSQL (MS SQL Server Developer), MongoDB (MongoShef), and SoupUI.
- o Designed and developed a load-testing (stress-testing) plan to estimate the required resources and organization of infrastructure for newly-made services by using JMeter and Fiddler
- o 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.
- o Designed, wrote, and executed security-oriented test plans and test case suites for the automation framework by analyzing the erratic Android system behaviors depending on various manufacturers and Android versions.

## Education and Training

#### **Computer Systems Technology Diploma Program**

**Graduated with Honors** 

Cumulative GPA: 95/100

(Artificial Intelligence/Machine Learning Option)

British Columbia Institute of Technology | Burnaby, BC

Centerprise Information Solutions Academic Award Recipient (Nov. 2018)

Summa Cum Laude

Bachelor of Science in Environmental Science and Ecological Engineering

Bachelor of Landscape Architecture in Environmental Design

Korea University | Seoul, South Korea Cumulative GPA: 4.24/4.50

Academic Excellent Scholarship Recipient for 7 Semesters

#### **Projects**

#### AlAbalone – Artificial Intelligence Game Playing Agent | BCIT | Burnaby, BC

o 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

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

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

O 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.

#### The Cube: A Virtual Identity in an Augmented Environment Project | Private Project

O Designed and developed a physical space (a box) that recognizes a skeleton of a person and gives the user an ability to control a character in an augmented environment.

#### Certifications

## **Cisco Certified Network Associate Routing and Switching (CCNA)**

Cisco Systems, Inc. | San Jose, United States

### Acquired: May. 2015

#### Outside Interests

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

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