Nicklaus Choo

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EDUCATION

CARNEGIE MELLON UNIVERSITY, PITTSBURGH, PA, USA Expected Graduation **2021**

Major Bachelor of Science in Computer Science **Cumulative GPA** 3.59 | **Fall 2019 GPA** 3.77 (Dean's List)

TECHNICAL KNOWLEDGE

PROGRAMMING LANGUAGES

C | C++ | Bash | Python | SML | HTML | CSS | JavaScript | VB

TOOLS

- Ansible - server configuration, OS initial startup configuration
- Jinja - test server configuration
- Jenkins - continuous feature/pipeline testing and deployment
- Docker - OS build testing

FRAMEWORKS

- Front-end- .ISO download UI, log reporting/warnings
- Back-end - pipeline optimization for .ISO builds
- Agile - tri-weekly sprint, daily SCRUM

SELECTED COURSEWORK | SPRING 2020

- 15-210 Parallel and Sequential Data Structures and Algorithms
- 15-259 Probability and Computing
- 15-260 Statistics and Computing

SELECTED COURSEWORK | COMPLETED

- 15-213 Introduction to Computer Systems
- 15-150 Principles of Functional Programming
- 15-122 Principles of Imperative Computation
- 15-112 Fundamentals of Programming and Computer Science
- 15-251 Great Ideas in Theoretical Computer Science
- 15-151 Math Foundations in Computer Science
- 21-241 Matrices and Linear Transformations

WORK EXPERIENCE

BOSCH ASEAN | Linux System Engineer Intern (DevOps) • **Singapore** **May 2019 - Aug 2019**

- Enabled Jenkins server to run 2 ISO builds in parallel (1 executor, 2 slaves) for testing via dynamic port allocation
- Automated mounting of QEMU disk on Jenkins server for log extraction to significantly reduce debugging time
- Automated unit tests on newly installed ISO files on physical and virtual machines
- Modified Jenkins pipeline to reduce deployment testing from 20 mins to 1 min
- Began migration of current inventory servers to new OCS inventory servers via Ansible for seamless configuration
- Designed and Implemented intuitive searchable user-interface for .ISO downloads

EYEOTA PTE LTD | Data Analytics Intern • **Singapore** **Dec 2017 – May 2018**

- Automated data cleaning and classification of advertiser and buyer data from programmatic buy-side platforms
- Extracted advertiser behavioral trends such as target demographics via both web-scraping and buyers' purchasing data
- Automated update process of daily, weekly, and monthly revenue generated from audience data sales

SINGAPORE ARMED FORCES | Platoon Sergeant, Transport Formation • **Singapore** **Jan 2016 – Nov 2017**

- Proactively automated daily vehicle accounting (available, under repairs, loaned out, on missions) of over 20 vehicle types and 400 individual units. This improved count time from 45 mins to 5 mins.
- Implemented intuitive soldier human resource forecast and daily attendance system to quickly track soldier movement to drastically speed up administrative tasks.

A*STAR SIMTECH RESEARCH | Machine Learning Research Intern • **Singapore** **Jun 2014 – Dec 2014**

- Selected as 6 of 1,140 students in my high school, Hwa Chong Institution, for a machine learning research internship
- Utilized k-means clustering, partial least squares regression, extreme learning machine, and multiple linear regression to predict ink cartridge lifespans, thus eliminating multiple destructive batch-testing.

PROJECTS

SHEET MUSIC ASSISTANT | 15-112 Programming Class Final Project • **CMU** **Nov 2018**

- Created Python application built in TkInter that utilizes optical and audio recognition to read sheet music PDFs
- Once read, application displays sheet music with two distinct capabilities:
  - listen to a user play from it in real-time and flip the page when necessary
  - play out the sheet music

EXTRA-CURRICULARS

- **Course Tutor (Spring 2020)** 15-251 Great Ideas in Theoretical Computer Science