Kate Kim

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Projects

Trip Planner

May 2019 – Present

https://github.com/nr2kim/TriPlanner

- Creating a website that helps users to plan, record, and share their trips with friends with necessary information
- Using **Google Maps**, **Places**, and **Directions** APIs to get detailed information of places and customizing map's display and behavior
- Gaining user experience design skills by thinking about better user interface with various operations

Cloud Management System

Jul 2018 – Sep 2018

https://github.com/nr2kim/Cloudeer-JavaFX

- Built a management system for easier access and search with multiple cloud storages in a single application
- Experienced various **Java** UI frameworks and **open-source APIs** of Dropbox, Google Drive, and One Drive

Student Card Simulation

Mar 2018 – Apr 2018

https://github.com/nr2kim/StudentCardSim

- Developed a simulation of a student card balance transaction system with **administrator and worker job pattern**
- Each entity such as a student, machine, or bank is represented as a thread, performing a random task at a random time
- Advanced knowledge on shared memory management, critical sections, and deadlock analysis

Experiences

Machine Learning Engineer

Sep 2019 – Present

Uber Advanced Technology Group

Pittsburgh, US

- Working with **Convolutional Neural Networks (CNN)** and implementing framework for performing inference with map data
- Gaining experience in various **Amazon Web Services (AWS)**, **Terraform**, and Machine learning libraries such as scikit-learn and numpy
- Studying and Discussing Deep Learning basics and algorithms throughout a reading group within the team

Firmware Features Software Engineer

Jan 2019 – Apr 2019

Cisco Meraki

San Francisco, US

- Implemented a configurable daemon process for measuring capacity and bottleneck of wide area network link with 95% accuracy in **C++**
- Created a graph generator for **Click modular router** elements and automatic upload to Wiki page
- Worked with **Yocto** and **OpenWRT** and made patches for bugs on open-source libraries such as HPing3 and cURL

Web and Cloud Application Developer

Apr 2018 – Aug 2018

Autodesk Inc.

Montreal, CA

- Built a responsive and interactive web component that shows the history of user operations and performs some useful commands such as delete and rewind to a historical snapshot-point in **TypeScript** with **React**
- Created data managing APIs using Autodesk infrastructure software in the cloud platform
- Developed unit-tests, smoke tests and integration tests using **Mocha**, **Chai**, **Enzyme**, and **Sinon**

Firmware Software Engineer

Sep 2017 – Dec 2017

Ford Motor Company

Kanata, CA

- Designed and implemented location-based services for next generation of Ford navigation system
- Experienced **serial programming** and developed **I^2C driver** for gyroscope, accelerometer and GPS data to calculate precise location
- Created unit-tests with **Google test** and **Google mocks** and experienced in test-driven development

QA Automation Developer

Jan 2017 – Apr 2017

IBM Canada

Toronto, CA

- Created a dashboard which uses Jenkins API to get test results in JSON format and inserts refined data into the corresponding database using RESTful APIs in **Python**
- Became familiar to Jenkins, its plug-ins, and **Groovy script** for orienting Jenkins jobs in sequential or concurrent manner

Education

University of Waterloo

Sep 2015 – Present

- *Probabilistic Reasoning and Reinforcement Learning*: Studied known methods for representation and reasoning about uncertain knowledge for the purpose of analysis and decision making
- *Concurrent and Parallel Programming*: Learned about deeper level of multi-threading, synchronization, and memory management
- *Distributed Systems*: Dealt with remote procedure calling, shared file system, distributed transactions and systems
- *Security*: Experienced with different types of cryptographic systems and attacks and secure design principles and techniques
- *Computer Networks*: Learned about different types of network protocols, switching, layering, and routing
- *Database*: Obtained knowledge about database design according to data models and database system architecture