

Kailin(Kellie) Gui

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EDUCATION

- **University of Washington** Seattle, WA
BS Computer Science; GPA: 3.79 *Expected Mar 2022*
- **Relative courses:** Data Structure and Parallelism, Software Design and Implementation, Data Management, Systems Programming

PROGRAMMING SKILLS

- **Languages:** Java, Python, C, C++, JavaScript, SQL, Cypher, NoSQL
- **Technologies:** AWS, Azure, GCP, Spring Boot, Gradle, Maven, Neo4j, Apache Spark, Linux, React

TECHNICAL EXPERIENCE

- **GEMSEC Computational Lab Research** University of Washington
Research Assistant *Jan 2020 - Present*
 - Researched on 3-D structures of protein binding within 2900 species and artificial proteins
 - Built a web crawler in Java and employed Python Pandas to analyse names, sequences and types of over 100,000 protein bindings for further research
- **Michael G. Foster School of Business Undergraduate Research** University of Washington
Research Assistant *Nov 2019 - Present*
 - Examined on examining video content homogeneity and quality, interaction of review contents and video contents, and social networks of users video content creations on the biggest Chinese video sharing website *bilibili*
 - Employed Java distributively crawled 79,500,000 videos information in 50 hours and analyzed video tags in 200 categories for further analysis
 - Optimized database schema to store 2 billions video Danmaku and video comments records. Applied NLP model to analysis language sentiment in those records.
- **DubHacks Classic Track Top 3** University of Washington
Hacker *Oct 2019*
 - Built a portal hardware to aid visually impaired people in exploring the world by capturing visual images and the distance of an object and outputting the information as voice messages to user's earphones
 - Utilized an ultrasonic sensor to detect the distance. Applied Google Vision API to detect objects, human faces and texts within images and generated texts stored in Raspberry Pi, and Google Text to Speech API to process the texts and output as audio. The backend is written in Python
 - Cooperated with three other students, scheduled work plan, and led dynamic working atmosphere to finish project in time.

PROJECTS

- **Stock Market Quantitative Monitor** Mar 2020
 - Built an Android app to compute and analyze various stock indicators including Exponential Moving Average (EMA) and Moving Average Convergence Divergence (MACD) using the historical stock prices in a certain period
 - Data source: **Spring Boot** based server crawls current and historical stock data
- **Husky Map II** Mar 2020
 - Built a distributive web app to display the UW campus map and allow users to find the shortest path between two campus buildings
 - Back-end: employ Java Gradle to implement MVC design pattern. Used Dijkstra algorithm to find the shortest path
 - Front-end: visualized the web page and user interaction via **React**