# Jehan Kobe Chang

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# SKILLS

Java • Javascript • Python • C • C# • C++ • HTML/CSS • Git • Android Studio • Unity • Node • ML • Amazon S3 • Blender Linux • Firebase Multithreading • Socket.IO • AWS • Swift • REST • Docker • Numpy • Jenkins • Matlab • Virtual Reality • Sketch

Relevant Coursework: Data Structure and Implementation Analysis, Design and Analysis of Algorithms, Machine Learning and Data Mining, Computational Linear Algebra, Applications of Probability in CS, Principles in System Design, Concepts in Programming Languages

# **EXPERIENCE**

# Samsung STAR Labs | Software Engineering Intern

2020

- Created and improved multiple apps for the new mobile device.
- Integrated realtime databasing, websockets, and machine learning services to enhance connectivity between users.
- Worked extensively with server-side experts and Android software engineers to make my applications scalable and user-friendly.
- Modified the Essential's Android Framework to enable special features and hide Easter Eggs.

(Java, Python, Javascript, Android Studio, AWS, Socket.IO, Node, Firebase, Sketch, Android Frameworks, Docker, Tensorflow, Github, Linux)

# Essential | Mobile Applications Intern

2019

- Created and improved multiple apps for the new mobile device.
- Integrated realtime databasing, websockets, and machine learning services to enhance connectivity between users.
- Worked extensively with server-side experts and Android software engineers to make my applications scalable and user-friendly.
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#### Amplify.ai | Software Engineering Intern

2018

- Worked on Amplify's Natural Language Processing (NLP) system to automate the process of ingesting training data for Amplify's Al
- systems, from customer's web sites, RSS feeds, FAQs and call center scripts. Hired to scrape data off of 48-Months-Of-Transforming-
- India website which has 7.7 million subscribers. Integrated REST and S3 to make their chatbot capable of providing daily news and
- performance updates. Added back-end functionality to the 48-Months Chatbot.

(Javascript, Amazon S3, REST, webscraping, Amplify's Bot Development API, JSON)

#### **Amplify.ai** | Software Engineering Intern

2017

- Completely automated the process of connecting UI design of a chatbot to the Amplify AI system.
- Developed a Sketch Plugin that allowed for rapid prototyping.
- Parsed a graphics design document into organized data structures that become mapped into a chatbot. With one click, UI designers
  were able to increase workflow efficiency and transform their Sketch designs into ready-to-use Amplify.ai Facebook Chatbots.
   (Javascript, HTML and CSS, Cocoascript, Sketch, Amazon S3, AWS webhooks, JSON)

# SELECTED PROJECTS

#### **Petr Chat: The Prethreaded Concurrent Server**

2020

- Used satellite cloud measurements from UCI's Hydrometeorology database to predict rainfall across the Earth.
- Implemented an ensemble of machine learning models: decision tree forest, feed-forward neural networks, KNN classifiers, K-means clustering
- Performed optimizations such as dropout regularization, bagging and boosting, genetic algorithms, and feature selection.

# **Machine Learning and Predicting Rainfall**

2020

- Used satellite cloud measurements from UCI's Hydrometeorology database to predict rainfall across the Earth.
- Implemented an ensemble of machine learning models: decision tree forest, feed-forward neural networks, KNN classifiers, K-means clustering
- Performed optimizations such as dropout regularization, bagging and boosting, genetic algorithms, and feature selection.

#### Remaking and Optimizing Glorious Noon For The Oculus Quest

2019 - Present

- Lead a team of 8 students in optimizing, 3D modeling, thematic story-telling, particle systems, and spatialization of audio and physics.
- Architected additional physics Al and virtual user interfaces to enable greater control of game mechanics on a limited mobile system.
- Recorded technical progress and art on personal website.

# Essential: Walkie Talkie / Voice Mode

2019

- Developed some core features of the company-wide Voice-Mode project through building a Walkie Talkie Easter Egg Android application.
- Created a scalable application that dynamically stores user data into Firebase, enables user customability, and integrates push notifications.
- Integrated fingerprint sensor as a way to choose users to stream to. Made a voice input/output socket server and hosted it on AWS Beanstalk.

#### Virtual Reality Game Developer: Glorious Noon (HTC Vive, Oculus Touch)

2017

- Developed a virtual reality game using Unity. It is cross-platform with over 20K downloads.
- Created all 3D models, used physics-based interactions to enhance VR realism, and integrated UI to add structure.
- Handled the publication, advertising, and developer-community outreach/feedback on Steam.

# **EDUCATION**