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 • Confluence

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**

Essential | Mobile Applications Intern **2019**

- Designed some core features of the company-wide Voice-Mode project through building a Walkie Talkie Android application.
- Integrated a Smart Reply machine learning service with the keyboard, which enables replies based on the user's selected personality.
- Built a multiplayer game called Rolling GEM by using realtime databasing, Socket.IO, and the accelerometer on the mobile device.
- Engineered solutions with server-side experts and Android software engineers to make my applications scalable and user-friendly.

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

Amplify.ai | Software Engineering Intern **2017 and 2018**

- Worked on Amplify's Natural Language Processing (NLP) system to automate the process of ingesting training data for Amplify's AI systems, from customer's web sites, RSS feeds, FAQs and call center scripts.
- Integrated **REST and S3** to make their chatbot capable of providing daily news and performance updates.
- Completely automated the process of connecting UI design of a chatbot to the Amplify AI system.
- 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, REST, webscraping, Amplify's Bot Development API, JSON)

SELECTED PROJECTS

Petr Chat: The Pre-threaded Concurrent Server | School Project **2020**

- Created a multithreaded server that allows clients to concurrently chat with each other and read server information.
- Implemented a protocol that allows thread-safe execution through use of mutexes and semaphores.
- Worked with **sockets** and **network connections**. Used C++ and Linux Terminals.

Machine Learning and Predicting Rainfall | School Project **2020**

- Used satellite cloud measurements from UCI's Hydrometeorology database to predict rainfall across the Earth.
- Assembled 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 | kokobe.github.io/GN **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 AI and virtual user interfaces to enable greater control of game mechanics on a limited mobile system.
- Recorded technical progress and art on personal website. Used **Unity, Blender, Git, and Sketch**.

Essential: Walkie Talkie / Voice Mode | kokobe.github.io/essential **2019**

- Architected all **server** and **database** interactions for events using **Firebase, Node, websockets, AWS, and Android Studio.**
- Created a scalable application that dynamically stores user data into Firebase, enables user customization, and integrates push notifications.
- Integrated fingerprint sensor to choose which users to stream to. Made a voice **input/output socket server** and hosted it on AWS Beanstalk.

Asymmetric VR: Fruit Ninja With A Twist | kokobe.github.io/asymVR **2019**

- "Asymmetrical Virtual Reality" happens when player interaction is split into two channels: the desktop and the VR kit.
- Lead and taught a group of students how to utilize this assymetrical feature and build a PvP Fruit Ninja game in Unity.
- Purpose of this project was to inspire inventive virtual reality game mechanics in UCI's Virtual Reality Club (VRUCI).

Virtual Reality Game Developer: Glorious Noon (HTC Vive, Oculus Touch) | Published on Steam **2017 - 2018**

- Developed and published 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

University of California, Irvine | Bachelor's Degree in Computer Science | GPA: 3.91/4.00 **2018 - 2022**

Campuswide Honors Collegium; Dean's Honor's List; Senior Standing; VR UCI Programming Officer