EJ KIM

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New York University, Bachelor's in Computer Science **Sept 2015 – May 2019**

WORK EXPERIENCE

Behold.ai – Medical AI Startup **July 2019 – Present**

Full Stack Software Engineer

- Design, develop, and document **Python microservices** for image processing pipelines deployed on **Linux** servers using **Docker** and **Kubernetes.** Monitor system health and performance using **Elasticsearch** and **Kibana**.
- Optimized a **React/Redux** web app to reduce load times for CT scans (often with **300+** images) by **50%** by loading images in smaller batches from **Django, PostgreSQL,** and **AWS S3** by preloading CT scans of the next study.
- Sped up CT Head scan AI report response time by **5x** by increasing Kubernetes pods for relevant microservices, utilizing multithreading and multiprocessing, and by interfacing with the machine learning team about Torchserve configs.

NYU University Learning Center **Aug 2020 – Sept 2020**

React/Node.js app for use by NYU ULC to create semester tutoring schedules by course
https://ulc-schedule-maker.herokuapp.com/

- Automated a manual task to reduce the time to create the schedule each semester from a **100+ hours** to **30 minutes**.
- Used the **Google Calendar API** to get shift schedules of **100** tutors that each tutor **10-20** courses, extracted time intervals of **~300** courses, and implemented an interval merging algorithm to automate the manual merging of **~1000** intervals.
- Deployed a **React** app on **Heroku** for the tutoring center to easily generate the schedules each semester and created a UI for tutors to select the list of courses they can tutor, allowing them to select courses from a list rather than manual entry.

American Museum of Natural History **Sept 2016 – May 2019**

Software Development Intern
https://ejkimvirtualrealityatamnh.wordpress.com/blog/

- Created **virtual reality** prototypes with the **HTC Vive** with **Unity/C#** such as a virtual vortex tunnel, giant jenga, and a volcano plank experience. Maintained a development blog of the prototyping before starting work on exhibit interactives.
- Developed 2D and 3D interactive exhibits for **5 million** annual visitors to the American Museum of Natural History, using **Unity** and **C#** (including Neural Pathways for *Our Senses,* Undersea Exploration for *Unseen Oceans*)

TECHNICAL SKILLS

- **Proficient:** Python, JavaScript, React, Redux, Unity3D, Django, MongoDB, NoSQL, Git, Github, AWS, HTML, CSS
- **Exposure:** Java, C#, C, Node.js, SQL, PostgreSQL, REDIS, Docker, Kubernetes, Microservices, RabbitMQ, Linux, Bash

PROJECTS

3D Paint-by-Numbers **Spring 2021**

A virtual reality prototype demo that reimages Paint-by-Numbers in 3 dimensions
https://twitter.com/eej_xr/status/1376627034835853312?s=20

- Developed a **hand-tracked** Oculus Quest 2 demo experience after learning from the XRBootcamp **Advanced VR Interactions Masterclass**. The demo video is used to promote and showcase the Masterclass since after my graduation.
- Utilized **DoTween** for smooth transitions and color animations that feel reactive to the user's intents.
- Coded hand gestures and UI interactions using the **OVR** package and reactive programming using **UniRx**.

Avalon Assistant **Spring 2018**

A mobile-friendly real-time React/Node.js app for character assignment and quest tracking

- Decreased the setup time for each round by **80%** by automating the character assignment and providing relevant info to each user. Designed to support multiple games at a time, each with 6–10 people.
- Incorporated persistent data storage by designing **MongoDB** models to store user, game, quest, and character info, and provided authentication using Passport.js through the Google OAuth2 protocol.