

Chao Pan

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MSCS student @Northeastern University, seeking a full-time software engineer position, NOT need visa sponsorship

EDUCATION

Northeastern University (Silicon Valley Campus)

San Jose, CA

Candidate of M.S. Computer Science, GPA: 3.88/4.0

Sep.2020-Expected May.2023

Washington University in St. Louis

St. Louis, MO

Ph.D., Energy, Chemical Engineering, GPA: 3.80/4.0

Aug.2013 – Dec.2017

SELECTED PROJECTS

Twitch+: A Personalized Twitch Resources Recommendation Engine

- Designed and built a full-stack web application for users to search twitch resources (stream/video/clip) and get recommendations.
- Built a web page with rich + user friendly experience using React and Ant Design
- Implemented RESTful APIs using Java servlets, retrieved real Twitch resources using Twitch API and stored data in MySQL.
- Support login/logout and favorite collection.
- Explored multiple recommendation algorithms and extracted game information from Twitch resources to implement a Content-based algorithm.
- Deployed to AWS EC2 for more visibility

Staybooking: An online stay rental application based on React and Spring Boot

- Designed and built a single page web application using React. Bootstrap the development with mature component library AntD.
- Implemented the backend services based on Spring Boot to support stay upload, delete, search and reserve functionality.
- Used MySQL to store user-generated data, e.g. stay information and reservation history, and utilized Google Cloud Storage to store media files for the uploaded stays.
- Created geo index by Elasticsearch to support geo-based stay search based on user's selected locations.
- Implemented token-based server side user authentication based on the Spring Security framework.
- Deployed the backend service to Google App Engine for better scalability and reliability.

Tinnews: a Tinder-like News App

- Designed the Instagram Flavor News app based on Google Component Architectural MVVM Pattern
- Implemented the bottom bar & page navigation using JetPack navigation component
- Utilized 3rd party CardStackView(RecyclerView) to support swipe gestures for liking/disliking the news
- Built the Room Database with LiveData & ViewModel to support local cache and offline model
- Integrated Retrofit and LiveData to pull the latest news data from a RESTFUL endpoint (newsapi.org)

Starlink: React JS based Starlink Trajectory Visualization

- Designed and developed a visualization dashboard using ReactJS and D3 to track satellites in real-time based on geo-location
- Built location, altitude and duration based selector to refine satellite search
- Animated selected satellite paths on a world map using D3 to improve the user friendness
- Deployed the dashboard to Amazon Web Service for demonstration

WORK EXPERIENCE

Research Assistant, Project Lead

Washington University in St. Louis, Dec.2013-Dec.2017

- Developing dynamic model and surface complexation model for predicting the fate and transport of chromium removal in water treatment
- Published 6 first/corresponding-author top scientific papers in research area

- Developed the research group website using HTML, CSS and JavaScript

Postdoc research staff

Lawrence Livermore National Laboratory, Mar.2018-May.2020

- Modelling biogeochemical processes affecting actinide transport in natural water environments

TECHNICAL SKILLS

- **Programming Languages:** Python, Java, C, JavaScript
- **Web Development:** HTML, CSS, React, Node.js, Angular JS, Express, MongoDB, MySQL, Firebase