Bixia Deng

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EDUCATION

University of California, Irvine   Graduating Fall 2021

B.S. in Computer Science   *GPA: 3.84/4.0*

- **Relevant Coursework**: Data Structure Implementation and Analysis, Design and Analysis of Algorithms, Introduction to Data Management, Concepts in Programming Languages I, Project in Databases and Web Applications

PROJECTS

Fabflix   Full Stack Web Application

https://fabflix.shop   *Apr 2021 - Jun 2021*

- Applied database management techniques on an individual project that adopts movie data domain to simulate an e-commerce shopping web application (domain includes 17k movies, 75k stars data, and etc.)

- Utilized web-server knowledge on building RESTful API and configured application with encryption in HTTPS and DNS

- Enhanced user interaction by converting the data retrieval method to support full-text search and autocomplete that uses Levenshtein distance

- Improved the application performance by 30% after applying Master-Slave replication and load balancer technique, then integrated the application to Android platform that retrieves data from the same backend environment

- **Technologies Used**: JavaServlet, Javascript, MySQL, AWS, GCP, Android, HTML/CSS

Let's Fika   Full Stack Capstone Project

https://letsfika.today/   *Jan 2021 - Jun 2021*

- Designed system models on database structure and web application functionalities

- Worked on website's user flow and administrative content management using MERN stack development

- Retrieved media contents from hosting platforms, Spotify and Youtube, by calling the APIs with OAuth2.0

- **Technologies Used**: React, Node.js, Express, MongoDB, HTML/CSS

Pixel Jump   Machine Learning Project

https://bikaylee.github.io/Pixel-Jump/final.html   *Oct 2020 - Dec 2020*

- Simulated jumping game using Malmo that train the agent to learn from a reward system that's based on its actions in a difficult environment with enormous action space in which the agent can choose the initial velocity and degree from a range of continuous data points to perform a jump simulation

- Trained the agent with the PPO algorithm that makes updates based on the transitions that were obtained by the current policy and is used in the agent's decision for better performance

- Calculated the 3D projectile motion data points to perform a real jump in Malmo

- **Technologies Used**: Python, RLlib, PPO, Gym

EXPERIENCE

Teacher Assistant (Java)   San Francisco, CA

CCSF CS Department   *Aug 2018 - May 2019*

- **Tutoring**: Held office hours to assist students in fundamental concepts like inheritance and polymorphism

- **Assignment Grading**: Evaluated 200 student's assignments with feedbacks

SKILLS

Languages: Java, Python, C++, JavaScript, MySQL   **Technologies**: React, Node.js, MongoDB