





# BIXIA DENG

San Francisco, CA

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## Education

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**University of California, Irvine**

*B.S. in Computer Science*

**Graduating Fall 2021**

*GPA: 3.84/4.0*

## Relevant Coursework

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- Data Structure Implementation and Analysis
- Design and Analysis of Algorithms
- Introduction to Data Management
- Concepts in Programming Languages I
- Intro to Artificial Intelligence
- Project in Artificial Intelligence
- Machine Learning and Data-Mining
- Project in Databases and Web Applications

## Projects

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### Fabflix

<https://fabflix.shop>

**Apr 2021 - Jun 2021**

*Full Stack Web Application*

- 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 & 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

<https://letsfika.today/>

**Jan 2021 - Jun 2021**

*Full Stack Capstone Project*

- 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

<https://bikaylee.github.io/Pixel-Jump/final.html>

**Oct 2020 - Dec 2020**

*Machine Learning Project*

- 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

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### Teacher Assistant (Java)

*CCSF CS Department*

**San Francisco, CA**

*Aug 2018 - May 2019*

- Held office hours to assist students in fundamental concepts like inheritance and polymorphism
- Evaluated 200 student's assignments with feedbacks

## Technical Skills

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**Languages:** Java, Python, C++, JavaScript, MySQL

**Technologies:** React, Node.js, GitHub