TOM XIE

2501 Benvenue Ave Apt 21 | Berkeley, CA, 94704 | (240) 367-5889 | xie.tom.zy@gmail.com

EDUCATION

University of California, Berkeley — Berkeley, CA

Bachelor of Science, Electrical Engineering and Computer Science (EECS) — Expected May 2022

Relevant Coursework:

- CS 70: Discrete Mathematics and Probability Theory
- CS 61C: Machine Structures
- CS 61B: Computer Science: Data Structures
- CS 61A: Structure and Interpretation of Computer Programs
- EE 16A: Designing Information Devices and Systems I
- EE 16B: Designing Information Devices and Systems II
- Stat C8: Foundations of Data Science

PROJECTS

ExpiryDate — Present

- Implement front-end portion of web application with intuitive UI and design that allows user to keep track of various expiration dates of food using React.js
- Use Kubernetes and Docker to help create and design a microservice architecture that allows for easier development and deployment.

Robot Collector: World Exploration Engine — April 2019

- Designed and implemented a Java engine that generates 2D tile-based worlds incorporating interactive mechanics such as moving robot sprites and limited player vision to create a playable game
- Implemented several features including multiple save files, name input, and a heads-up display

BearMaps — March 2019

- Created a web-mapping application using Java that changes resolution and depth based on a user's query
- Implemented a routing algorithm using KD-trees to find optimal path between two locations and an autocomplete feature that allows the user to search for and locate specific places

VOLUNTEER EXPERIENCE

CS 61B Academic Intern
UC Berkeley EECS Department — August 2019 - Present

- Assist UGSIs teach a computer science data structures class of over 1000 students by providing more personal support in helping students learn
- Help students on programming fundamentals taught in homework, labs, and projects including OOP, Hashing, sorting, and search algorithms

Intern/Teacher
Youth Building Bridges — May 2019 - July 2019

- Developed an English language curriculum consisting of PowerPoints and classroom activities to show Chinese English teachers in impoverished China a more engaging way of teaching English
- Educated both teachers and students various aspects of American education and culture

SKILLS

Programming/Software:

- Proficient skill in Java, Python (including NumPy libraries), C, Scheme, Microsoft Office, SQL (MySQLdb and phpMyAdmin), JavaScript, HTML/CSS, Linux, RISC-V, and React.js

Writing/Research:

- Co-authored three scientific articles in Tuscarora High School's iGEMS Bioengineering Club explaining the processes used to develop a synthetic seaweed to prevent a parasite, *Perkinsus marinus*, from reaching oysters in the Chesapeake Bay (see Publications)

PUBLICATIONS

- **Co-author**: "Methods for Producing Cellulose Using the Bacterium Gluconacetobacter xylinus." *BioTreks*, vol. 1, no. 1, 2016, http://biotreks.org/e201601/.
- **Co-author**: "Evaluating the Potential Use of a Cellulose Binding Domain to Protect Oysters from Perkinsus marinus in the Chesapeake Bay." *BioTreks*, vol. 1, no. 1, 2016, http://biotreks.org/e201605/.
- **Co-author**: "Saving Oysters in the Chesapeake Bay Using Synthetic Seaweed." *BioTreks*, vol. 2, no. 1, 2017, http://biotreks.org/e201705/.