

David Pang

917-455-2558 | dpang1124@gmail.com | <https://github.com/dpang1124>

EDUCATION

- **University at Buffalo**, Buffalo, NY Computer Science BS - Anticipated 2025
- Relevant Coursework:

Algorithms and Complexity	Data Structures	Object Oriented Programming	Discrete Structures
Computer Organization	Systems Programming	Calculus	Software Engineering Concepts
Technology Entrepreneurship	Probability Theory	Linear Algebra	Web Applications

TECHNICAL SKILLS

- Languages: Python, Java, Javascript, C++, C, Scala
- Developer Tools: IntelliJ, Visual Studio Code, GitHub, Docker, PuTTY
- Web Development Tools & Frameworks: HTML, CSS, JavaScript, React, Django, MongoDB, PostgreSQL, Express

WORK EXPERIENCE

Lee's Market

December 2024 - Present

Full-Stack Developer

Tech Stack: React, React Bootstrap, PostgreSQL, Express, Node.js, JWT, Docker, nginx, PuTTY

- Designed a responsive front-end user interface adapting multiple screen sizes using React and Bootstrap libraries.
- Implemented user creation and authentication using hashing, salting, and XSRF protection with PostgreSQL, Express, JWT, and PuTTY for secure remote database access.
- Collaborated with UX Designer and Product Manager to implement features aligning with customer needs and preferences.
- Architected RESTful backend with API endpoints and containerized app & database through docker for scalable deployment.

PROJECT EXPERIENCE

Interactive Web Platform

December 2024

Python, HTML, CSS, Javascript, MongoDB, Docker, Spotify API

- Created an interactive web application with secure user login and registration, using hashing, salting, and XSRF tokens.
- Developed a real-time chat feature with injection projection using WebRTC, WebSockets, and AJAX polling.
- Implemented multimedia uploads, leveraging TCP buffering, multipart parsing, and byte signature decoding.

Instant Messenger

May 2023

C, Python, GNU Make

- Developed a live messaging system using a Python-based socket-server with threading to support concurrency.
- Used GNU-Make to automate dependency management, compilation, and testing in the build pipeline.
- Engineered encoding and decoding logic for data packets using pointer, padding, casting, and serialization.

Enemy AI

January 2023

Scala, Java, Javascript, HTML

- Implemented primitive enemy AI behavior using grid based data structures with tick dependent frames
- Utilized Graph and Tree exploration, state-pattern, and inheritance to determine player state and distance.
- Detected collisions and incorporated magnitude for entities using Java's physics engine and vector libraries.

Public Data Anonymization

September 2022

Java

- Developed an algorithm that parses CSV files and identifies vulnerabilities exposing personal information.
- Optimized data manipulation and retrieval by using Hash Table ADTs and custom keys to override hash-code and equal methods, ensuring minimal O(1) or O(N) complexities
- Validated functionality of matching algorithm with thorough unit testing ,resolving potential edge cases.

Point of Sale

September 2021

Scala, MySQL, Socket.IO, Play Framework, SLF4J

- Architected a Point of Sale checkout system, applying inheritance, polymorphism, and state-pattern to create item components and discount classes.
- Leveraged an MVC architecture to support item data collection, checkout UI, and backend logic.
- Developed event handler classes that enables credit and cash payments for regular and loyalty members.