Nigel Fang

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EDUCATION: **California State Polytechnic University Pomona**
Bachelor of Science in Computer Science
GPA 3.46/4.0 Graduation date: May 2023

Yonsei University, Seoul Korea
Study Abroad for Fall 2022

RELEVANT COURSES:

- Data Structures
- Design and Analysis of Algorithms
- Data Mining
- Deep Learning
- Software Engineering
- Computer Vision
- Object Oriented Programming C++/Java
- Web Development and Application
- Big Data Analytics and Cloud Computing

WORK EXPERIENCE:

Freelance Full Stack Web Developer | HTML, CSS, JavaScript, PHP **June 2020 – Present**

- Reduced operation costs by optimizing backend server configuration and responsiveness by 1400%.
- Optimized website performance by compressing image loading which improved load times by 40%
- Optimized security by implementing Google Captcha API which reduced spam emails by 95%

PROJECTS:

CPP Enrollment System Program | Python, MySQL, PostgresQL, XAMPP

- Mimicked the enrollment system at Cal Poly Pomona and saved individual users to local database
- Developed the data pipeline that transferred information from the local database to the GUI using Java with Postgres and MySQL connections to allow access to the local database
- Practiced Agile methodology using Git, DrawIO, Balsamiq, and Astah to create a functional system

Weightlifting Desktop Application | Java, SQLite

- Desktop application that takes user inputs and calculates the target goal for strength in Olympic Weightlifting
- Created the front end GUI using JavaSwing for event management to run back end functions
- Database storage was handled by SQLite for lightweight embedded management

Photoplethysmography Neural Network | Python, MATLAB

- Deep Learning project that takes PPG readings from datasets or camera footage and predicts future readings
- Uses PyTorch libraries to build the model, however hyperparameters and layers were set and created by hand
- Scores above 98% validation rate on the test set and above 90% on live demonstrations

Picture Stitching | MATLAB

- Takes two images, computes the homography given at least 8 pairs of coordinates and stitches the pictures together
- Uses key point recognition and computes the projective transformation and applies a warping filter to the images

Interactable Task List | JavaScript, React.JS, HTML, CSS, PostgreSQL

- Allows users to move tasks between different stages of task management
- Created the front end GUI using React and utilized the react-draggable library to implement the drag and drop elements.
- Database storage was handled by PostgreSQL to save tasks and unique users

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TECHNICAL SKILLS:

- Java, Python, C++, C, MATLAB, SQL, HTML/CSS, Git, React
- Full Stack, CI/CD, Linux, Agile, Scrum, Gradle, SQLite, MySQL, XAMPP