Andrew Lai

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Skills

Languages: C++, C#, Python, R, Java, TypeScript, HTML/CSS, MATLAB, Bash, LaTeX
Relevant Frameworks/Libraries: React, Node, Flask, Express, GSAP, NumPy, Tkinter, Tidyverse, PyMongo
Other: Unity, UE4, Git, Docker, MongoDB, MySQL, JupyterLab, Linux Shell, VS Code, Figma, Adobe CC

Experience

Front End Developer, Lead UI/UX Designer
UBC DSCI

Sep 2023 – Present
Vancouver, BC

- Tasked with redesigning and developing The Pacific Conference on Artificial Intelligence 2024 site.
- Followed a relaxed Agile-scrum schedule to ensure consistent progress
- Communicated with marketing and content teams to ensure all information was concisely presented on pages

Research Software Engineer
UCW Labs, Farmer's Hive

Jan 2023 – Apr 2023
Vancouver, BC

- Predicted irrigation levels based off of historical sensor data provided by UCW Labs and OpenWeatherMap APIs
- Designed and rigorously tested the program with the objective of delivering the service to clients using Farmer's Hive smart sensors
- Worked in a small team, utilizing GitLab for version control

Software Engineer, Graphic Designer
SubVision Robotics

August 2023 – Present
Burnaby, BC

- Worked with Python and ROS1 to help the mechanical and electronics team prepare a functional prototype ROV for 2024 MATE ROV competition
- Instructed members on using Github to aid in the development and deployment process

Creative Director, Graphic Designer
P6.jpg, xegativ

Sep 2019 – Jan 2023
Vancouver, BC

- Managed and co-led a team of designers in creating visually compelling artwork for clients, resulting in sales totaling $20,000
- Developed clear and concise communication skills through direct client interactions, while also ensuring the production of high-quality design solutions

Projects

Path- and Floor-Casting Demonstration | *Python, PyGame, Matplotlib, Tkinter* ⚙ xegativ/Crossy-Road-Matplotlib
- Simplified first-person implementation of arcade game Crossy Road; rendered on Matplotlib through ray-casting
- Designed and implemented game mechanics including character movement and collisions with obstacle objects

Platformer Game | *Unity, C#* ⚙ xegativ/Archive-Platformer-Game
- Platformer game featuring local multiplayer, multiple weapons of varying attributes, explosive physics with Rigidbody, and sliding/dashing mechanics
- Use of custom artwork created in Adobe Photoshop

OutfitLB | *Python, MongoDB, Tkinter, scikit-learn* ⚙ xegativ/OutfitLB
- Produced a desktop app that stores and manages clothing, outfits, and closets
- Custom class implementation and utilization of Object-Oriented Programming principles
- Stores user data on MongoDB to allow for data access across devices

mySips | *React, TypeScript, MySQL, Express, Passport.js* ⚙ xegativ/mySips
- Constructed web app for storing and managing beverages with MySQL
- Utilized modular React components and hooks to create a visual and accessible user experience
- Developed backend API endpoints to retrieve and post user data, using Passport.js for authentication

Education

Simon Fraser University
Bachelor of Engineering Science, Computer Engineering

Jan 2023 – Present
Burnaby, BC