Kenny Zhang

Computer Science Major, Minor in Interactive Arts and Technology

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Skills

- **Languages:** C, C++, C#, Python, Powershell, Unix bash, HTML, CSS, JavaScript, TypeScript, Java, Swift, XCode
- **Frameworks:** Unity, Node.js, Express.js, React.js (Basic), Next.js (Basic), Kubernetes (Basic), SQL, Pandas, NumPy
- **Technologies/Tools:** Active Directory, SCCM, Microsoft Exchange, ManageEngine, Veeam, Git, Jira, Cypress (E2E)
- **Methodologies:** Scrum, Agile, ITIL, Kanban
- **Transferrable:** Excellent communicator, fast learner, critical thinker, effective team player

Experience

Mission Operations Co-Lead, *(SFU Satellite Design)* *Sept 2023 - Present*

- Led a team of 2 designers, and supported 2 developers in the design and full implemention of the ALEASAT website.
- Designed the Image Request Portal, Image Approval Screens, and the interaction user flow using Figma.
- Developed the low-level python interface using GRPC interfacing the ALEASAT with the high-level web interface with Node.js and TypeScript.
- Implemented microservice architecture using a monorepo and deployed using Kubernetes, adopting the router-controller-services paradigm.

Data Visualization Programmer, *(SFU Faculty of Education)* *Jul 2022 - Sept 2023*

- Designed interfaces using Figma and coded web interfaces with Leaflet.js and HTML, CSS and JavaScript to interactively plot research and publication data on a map with informational cards.
- Implemented an efficient backend with Node.js, Express.js using MySQL database and deployed on CPanel to track and store tabulated research entries with less than 200 ms access time.

IT Support Technician (Co-op), *(College of Physicians and Surgeons of BC)* *Feb 2021 - Aug 2021*

- Collaborated with the IT Helpdesk team with triaging, and resolving user requests using Jira, resolving 20+ requests a week.
- Resolved College-wide email extraction problem using Powershell scripting and AD tree traversal simplifed to a button click.
- Implemented a potential cost saving PDF solution: PDFelement. Uses single purchase perpetual licence and has the same features as Adobe but saves up to CAD 100,000 in 5 years.

3D Artist and Front-End Developer, *(Simon Fraser University, Science World)* *Oct 2020 - Jul 2021*

- Collaborated with Project Manager, developer and VR videographer to produce high quality 3D models for the educational project Science World - Observation Hive AR/VR.
- Used Zappar's AR computer vision libraries for the AR component and Unity WebGL for web AR deployment, increasing engagement by 30%.
- Developed a custom gesture and motion controls script for the Bee previews and Beehive, reduce response times to under 300ms.

iOS Frontend Developer, *(Game of Apps)* *Jun 2019 - Aug 2019*

- Implemented Expand Your Knowledge, a searchable repository sorted with all lecture materials for all sessions of GoA, along with improving the functionality of the main dashboard screen reducing search time by 10%.
- Collaborated with other team members and helped them resolve bugs with their code and ensure project requirements are met.
- Developed and improved the Credits screen and ensured the screen matches the expectations per the design team.

Projects

VOLTCRAFTER VR TRAINING, *(Unity)* *Jan 2024 - Aug 2024*

- Developed VR EV electric battery replacement procedure using Unity for client Vancouver Community College.
- Utilised the AutoHand library to efficiently implement required VR interactions in consultation with UX Lead.
- Used Object Oriented Programming to encapsulated complex systems and improve development efficiency using polymorphism.

C++ 3D Game Engine, *(C++)* *Jan 2023 - Feb 2024*

- Built an efficient software 3D renderer using only the Windows API and C++ standard library with matrix library implemented from scratch.
- Applied concepts from computer graphics such as linear transformations, graphic pipelining and pixel shading using object oriented programming to keep game components organized, decreasing development times by 25%
- Implemented multithreaded and parallel execution routines for graphic routines and used a difference-based image rendering system, allowing up to HD output and up to 100K polygons.

The Last Custodian, *(Unity)* *Jan 2024 - Apr 2024*

- Developed 2D platforming and puzzle stages using Unity with a group of 3.
- Playtested with five users and conducted user research to improve player satisfaction by 10%.
- Utilised the Corgi library to efficiently implement inventory systems, spray mechanic and saving, allowing for complex multi-stage levels and interleaving platformer and puzzle stages.

Missing Mystery, *(Unity)* *Jan 2023 - Jan 2023*

- Won CAD 500 sponsor prize from Livepeer's Best Overall Video Applications in nwHacks2023
- Used Livepeer's REST-based decentralized video streaming service to render videos onto 3D screens in realtime.
- Collaborated with a team of 3 to build a mystery investigation game based on the concept of finding and searching clues and evidence to connect the story together.
- Combines an immersive exploration based 3D environment with video and image based storytelling.

Plant Scan, *(Node.js)* *May 2022 - Aug 2022*

- One of the 5 selected groups out of 20 to undergo a employer project for the company AvaGrows.
- Developed using HTML, CSS, JavaScript and utilized a custom Postgres Elephant.SQL server deployed using Heroku.
- Designed a web application with a team of 5 to capture, store and display information about various plants captured using a Convolutional Neural Network REST API.

Volunteering

CS Peer Tutor, *(Simon Fraser University)* *Jul 2022 - Jan 2023*

- Assisted and helped students that are struggling with course concepts and coursework and provided guidance and debugging help when appropriate.

Swift Developer for Team "IDK", *(Game of Apps)* *Sept 2018 - Apr 2019*

- Worked in a team of five people and prototyped the design of the app using Figma.
- Developed the Zenplify task scheduling and management app for the Game of Apps mobile app development competition using the Swift programming language and Xcode.
- Presented the app to library patrons at the Game of Apps Showcase at Richmond Public Library showcasing the app's history, the motivation for creating the app and a live demonstration of the app to library patrons.

Education

B.Sc Computer Science *Simon Fraser University* **Burnaby, BC** *June 2025*

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Dean's Honour Roll: Spring 2024. Relevant Coursework: CMPT 412 Computer Vision.