Patrick Zhu

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EDUCATION

University of Michigan   08/2021 – 05/2025
B.S.E. in Computer Science, Minor in Art and Design   *Ann Arbor, MI*
- GPA: 3.87
- Completed Coursework: Programming Paradigms, Computer Organization, Data Structures and Algorithms
- Current Coursework: Operating Systems, Web Design
- Future Coursework (Completed by Summer 2024): Web Systems, Database Management Systems, Creative Programming

EXPERIENCE

Software Engineer Intern   05/2023 – 08/2023
Lucid Software   *South Jordan, UT*
- Intern on the Marketplace Team, engaging in full-stack development with a focus on UI front-end to create a platform for 3rd party partners to have their Lucid product integrations/extensions displayed to customers.
- Built components for the Lucid developer portal, homepage, and application listing page using the TypeScript-based Angular framework, HTML/CSS, a Scala backend, and MySQL database management.
- Designed, implemented, and tested entirely new features including Lucidchart hotkeys and embedded video in extensions' listing pages (see project section).
- After launching at the end of my internship, the Lucid marketplace homepage has been viewed by ∼800 users daily, with 10+ 3rd party launch partners and 100+ apps on 82 app listings.

Navigation Team Member   08/2022 – 01/2023
University of Michigan Autonomous Robotic Vehicle (UMARV)   *Ann Arbor, MI*
- Utilized Robot Operating System (ROS) to control UMARV vehicle.
- Interpreted LiDAR data for A* path planning algorithm to optimize vehicle movement.

MRover Simulation Team Member   08/2021 – 01/2022
Michigan Mars Rover (MRover)   *Ann Arbor, MI*
- Simulated navigation algorithms to optimize rover operations for competition.
- Fixed physics handling for more accurate driving with C++ in the Unreal Engine MRover simulator.

Artist Assistant   05/2022 – 08/2022
University of Michigan Museum of Art   *Ann Arbor, MI*
- Constructed a 7-foot-tall sculpture to be displayed in an exhibit.
- Ran workshops with the general public, allowing them to contribute to the pieces within the exhibit.

PROJECTS

Hotkey Trinity (Lucidchart) — *Angular/Typescript, HTML, CSS*   07/2023
- Designed various hotkey related improvements to Lucid products (Lucidchart/Lucidspark) as part of a hackathon team. These included custom hotkey bindings, hotkey based navigation, and a quick focus hotkey.

Lucid Extensions Listing Video — *Angular/Typescript, HTML, CSS, Scala, MySQL*   08/2023
- Created features using Scala and Angular, empowering 3rd party Lucid extension developers to showcase an instructional video within their extension's listing page.
- Added functionality for optional video URL submission within the developer portal, complete with URL validity/security checks and a parser to extract data necessary to support popular video sources (Youtube, Vimeo, Wistia, and more).

Thread Library — *C++*   09/2023
- Developed a library for multithreaded programming with Mesa-type monitors, emulating thread, mutex, and condition variable functionalities on multiple processors.

TECHNICAL SKILLS

Languages: C++, C, Python, Typescript, HTML/CSS, Assembly, Java, Scala, SQL
Various Technical: Unix, Git/Version Control, Xcode, VS Code, IntelliJ
Other: Agile development experience, Video/Image Editing, Heavy Experience in Fine Art