

ANDREW C. HUIE

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Software engineer with five years of experience developing complex systems and applications. Strong problem solver accustomed to working in Python and the Linux commandline on containerized programs. Interested in developing reliable, maintainable, and intuitive software.

EXPERIENCE

Mujin, Inc. — Autonomous industrial robotics solutions Jun 2021–Present
Software Engineer Koto, Tokyo, JP

- Developed testing simulator for continuous integration (CI) pipeline
 - Fully simulated Mujin Controller robot cells with Python & OpenRAVE—including UI interactions, IO signal timing, 3D cameras, collision detection, warehouse control systems (WCS)/programmable logic controllers (PLC), and more
 - Wrote and maintained per-project test suites of feature tests, corner cases, and injected fault scenarios
- Built and maintained developer tooling to enable building and supporting many account projects
 - Developed system monitoring bot written in Go
 - Worked on system diagnostics and inspection webapp using React
 - Orchestrated containerized web services with Kubernetes
 - Managed JHBuild configurations for reproducible, versioned system builds and development environments
- Set up and calibrated physical 6-axis robot test cells and successful expo demos

Ascent Robotics, Inc. — Autonomous robotics technology development Sep 2017–May 2021
Senior Software Engineer Shibuya, Tokyo, JP

- Developed autonomous vehicle simulation suite for training/evaluating decision-making algorithms
 - Lanelet2/OpenDrive map generator for in-house road network format, designed to facilitate searching for difficult scenarios in Rust
 - Emulation of perception stack output for agent training in sim environment in Python
 - Lightweight collision sim for MCTS playout/rollout step in Rust
 - High fidelity driving sim using Unreal Engine 4 with output similar to car platform
- Conducted screening interviews for hiring candidates
- Created data generation pipeline for object recognition in [publication](#):
Object Detection using Domain Randomization and Generative Adversarial Refinement of Synthetic Images *ArXiv 2018*
Fernando Camaro Nogues, **Andrew Huie**, Sakyasingha Dasgupta

TECHNICAL PROFICIENCY

Computer Languages

Proficient

Python

Familiar

Rust, Bash, Go, C++, JavaScript

Development Tools

Pytest, GNU/Linux (Arch Linux & Debian), Git, Docker, Nix & Nixpkgs

EDUCATION

Rice University *Houston, TX, USA*
Bachelor of Arts in Computer Science, 2016

Relevant Coursework: Automata, Formal Languages, and Computability; Computer Game Design; Tools and Models in Data Science; Computer Security; Computer Networks

PROJECTS

scrambler [github.com:achuie/scrambler](https://github.com/achuie/scrambler)
Scramble generator for the Rubik's Cube. Random move generator as a baseline, with a more sophisticated IDA* solver in the works. Packaged with Nix `$ nix run github:achuie/scrambler -- rand`

Cutthroat [github.com:achuie/cutthroat](https://github.com/achuie/cutthroat)
Networked multiplayer, top-down, ASCII-art shooter video game written in Java in which players mine for ammo and weapon upgrades, and win by reaching a number of kills.