

# ANDREW C. HUIE

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

## EXPERIENCE

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- Mujin, Inc.** — Autonomous industrial robotics solutions Jun 2021–Present  
Koto, Tokyo, JP  
*Software Engineer II*
- Developed testing simulator for continuous integration (CI) pipeline
    - Simulated QML UI interactions to confirm required workflows
    - Emulated customer warehouse control systems (WCS/PLC) with I/O in Python to ensure project-critical integrations and features
    - Designed and implemented routines for custom gripper interactions and behaviors in project specs
    - Wrote and maintained per-project test suites of feature tests, corner cases, and injected fault scenarios to provide guarantees for project deliverables
  - Built and maintained developer tooling to enable building and supporting many account projects simultaneously
    - Developed system monitoring bot written in Go to keep track of live deployments
    - Worked on system diagnostics and inspection webapp using ReactJS and Python, enabling quick and detailed debugging
    - 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  
Shibuya, Tokyo, JP  
*Senior Software Engineer*
- 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

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<b>Computer Languages</b>	Python, Rust, Bash, Go, C++, Java, JavaScript
<b>Development Tools</b>	Pytest, GNU/Linux (Arch Linux & Debian), Git, Docker, Nix & Nixpkgs

## EDUCATION

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**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

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- 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.