

# ANDREW C. HUIE

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## 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

## TECHNICAL PROFICIENCY

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### Computer Languages

**Proficient**

**C++, Python**, Rust, Java

**Familiar**

Bash, Javascript/HTML/CSS

**Development Tools**

Linux, Git, CMake, IntelliJ, Nix Package Manager, Visual Studio

## EXPERIENCE

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**Ascent Robotics 株式会社** — Autonomous robotics technology development

Sept 2017 – Present

*Senior Software Engineer*

*Shibuya, Tokyo, JP*

- Contributed to autonomous vehicle simulation suite
  - Lanelet2/OpenDrive map generator for in-house road network format, designed to facilitate searching for difficult scenarios
  - Emulation of perception stack output for agent training in sim environment
  - Lightweight collision sim for MCTS playout/rollout during simulation step
  - High fidelity driving sim using Unreal Engine 4 with output similar to car platform
- Conducted screening interviews for hiring candidates
- Created simulation environment for robot arm pick/place project, exposing handles for domain randomization of objects, background, object position, lighting, and perspective for training data generation in [publication](#):

Object Detection using Domain Randomization and Generative Adversarial Refinement of Synthetic Images *ArXiv* **2018**

Fernando Camaro Nogues, **Andrew Huie**, Sakyasingha Dasgupta

**Dr. Robert Cartwright, Rice University** — Object-oriented program development

May – Sept 2016

*Research Assistant*

*Houston, TX, USA*

- Created a new release of [DrJava](#), a pedagogic integrated development environment (IDE)
- Adapted the JaCoCo Java code coverage library for integrated use in DrJava
- Debugged JUnit integration, Find/Replace, other UI features

**Dr. Dan Wallach, Rice University** — Java TCP/IP penetration testing

May – Aug 2015

*Research Assistant*

*Houston, TX, USA*

- Inspected the security of TCP connections in Java 8, regarding the HotSpot JVM heap
- Analyzed the JVM heap with VisualVM across GC stress tests in VMWare
- Discovered and patched security flaws

**LumaDyne Aerospace & Scientific, LLC** — Purpose-built scientific instruments

Feb – Aug 2014

*Electrical Engineering Intern*

*Houston, TX, USA*

- Designed and fabricated application-specific printed circuit boards with tools including Multisim, Ultiboard, and LabVIEW

## 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.

### 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.