

# Richard Luo

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🇺🇸 United States of America

## Education

**Georgia Institute of Technology**, *B.S. Computer Science, 4.0 GPA*

Atlanta, USA

Expected Graduation: December 2023

- GT Agency (Machine Learning Club) - Vice Internal Operations
- GreyHat (Cybersecurity Club) - Vice President

Relevant Coursework: Linear Algebra, Multivariable Calculus, Intro to Algorithms and Data Structures, Intro to Discrete Maths, Combinatorics, Intro to AI, Objects and Design, Computer Org and Design

## Professional Experience

**Georgia Tech RAIL Lab**

2021/08 – present | Atlanta

Working with Dr. Chernova in Robot Autonomy & Interactive Learning (RAIL) Lab on smart-home active assistance

**Georgia Tech Security Operations Center**, *Cyber Security Analyst*

2021/06 – 2021/08 | Atlanta

Identified and mitigated security incidents with FireEye and Palo Alto Networks Cortex XSOAR, triaged incoming threats, and managed network traffic. Reviewed compromised systems and worked alongside system administrators to appropriately mitigate any active threats

**Georgia Tech Research Institute**, *Undergraduate Research*

2021/01 – 2021/08 | Atlanta

Researched privacy-preserving biometric authentication under the supervision of Dr. Wenke Lee. Built frontend with React.js/Tensorflow.js for facial recognition and detection and implemented OAuth 2.0 Authorization/Identity server for SSO using Java/SQL backend.

## Skills

Java, Python, C++, C, Machine Learning, Deep Learning, Git, Algorithms, IntelliJ, PyCharm, Numpy, Cloud Computing, Postman, Wireshark, Tensorflow, HTML, CSS, Javascript, React.js, Bash, Google Cloud, Docker, Chinese, SQL

## Awards

**BSidesBOS CTF (Top 1% Worldwide) 9th Place**

2020

**CSAW CTF Finalist Qualifier**

2020

**CUCTF 2nd Place Winner**

2020

## Projects

**U2 Background Removal** [↗](#)

2021/06 – present

State-of-the-art deep-learning based background removal built with U2-Net, a concise yet powerful deep network architecture for salient object detection

**Sketch2drawings**

2021/02 – present

Using Conditional Generative Adversarial Networks (cGANs), Sketch2drawings performs paired image-to-image translation on sketches and drawings. This deep learning mapping allows the project to turn a black and white sketch into a colorized drawing.

**GoodbAI**

2020/07 – 2020/08

Using deep learning and OpenAI's GPT-2, GoodbAI aims to clone the natural language of a user/person. The first model was trained on Kobe Bryant's tweets, web-scraped using TWINT. For dataset based on tweets, GoodbAI is able to recognize handles (@user), emojis, and hashtags.

## Certifications

**Machine Learning**, Coursera [↗](#)

**Neural Networks and Deep Learning**, deeplearning.ai [↗](#)

**Structuring Machine Learning Projects**, deeplearning.ai [↗](#)