# Michael Hu

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## EDUCATION

**Princeton University** Princeton, NJ
BSE in Computer Science September 2017 - May 2021

- Minors: Statistics and Machine Learning, Robotics and Intelligent Systems
- GPA: 3.90 / 4
- Coursework: *Theoretical Machine Learning, *Advanced Natural Language Processing, Robotics, Computer Vision, Computer Networks, Intro to Systems, Advanced Algorithms, Bayesian Modeling, Real Analysis

* indicates graduate-level course

## EXPERIENCE

**Princeton Natural Language Processing (PNLP) Lab** Princeton, NJ
Research Assistant September 2019 - Present

- Designing reinforcement learning agents that understand natural language constraints, such as “Don’t step in puddles.” Creating a new dataset to test agent performance. Paper link: arxiv.org/abs/2010.05150
- Calibrated GPT-2, a neural language model, to produce text more consistent with everyday speech. Constructed and implemented new approximation algorithms to reduce GPT-2 calibration costs. (PyTorch)

**Roblox** San Mateo, CA
Software Engineering Intern June 2019 - August 2019

- Engineered ContentFilter, a high throughput (~15k qps) backend service that censors inappropriate text across the entire Roblox platform. Led 5 engineers to test and deploy ContentFilter. (C#, Docker)
- Fine-tuned BERT, a neural language model, to perform Named Entity Recognition (NER). (Python, PyTorch)
- Wrote scripts to automate the labeling of BERT’s training data using Snorkel, a data programming package. Briefed 20+ Roblox engineers and data scientists on Snorkel and its use cases. (Python)

**BatteryPOP** New York, NY
Software Engineering Intern June 2018 - August 2018

- Co-developed yaasgames.com, an HTML5 games website. Enabled BatteryPOP to generate ad revenue from yaasgames.com by adding slots for banner and video ads. (WordPress, HTML, CSS, PHP)
- Built a BatteryPOP-branded game in Roblox as a proof of concept. Showcased the game to the CEO and VP of Sales, explaining possible paths towards monetization. (Roblox Studio, Lua)

**Personal Project: Disci.** May 2018 - March 2019

- Disci is a virtual card game that teaches chemistry. Alpha tested Disci with 30 high school students. (Unity)

## SELECTED PUBLICATIONS

* indicates equal contribution

Yang, Tsung-Yen*, **Michael Hu***, Yinlam Chow, Peter J. Ramadge, and Karthik Narasimhan. "Safe Reinforcement Learning with Natural Language Constraints." *NeurIPS 2020, Deep Reinforcement Learning Workshop*.

Mestre-Fos, Santi, Petar I. Penev, Suttipong Suttapitugsakul, **Michael Hu**, Chieri Ito, Anton S. Petrov, Roger M. Wartell, Ronghu Wu, and Loren Williams. "G-Quadruplexes in Human Ribosomal RNA." *Journal of Molecular Biology.*

## SKILLS

**Languages:** Proficient with Python and JavaScript. Familiar with R, Java, C, C#, Go, HTML, CSS, and PHP.
**Data Science:** PyTorch, TensorFlow, Keras, Jupyter, RStudio, Mechanical Turk, AWS, CUDA.
**Web Development:** WordPress, Node.js, .NET Core, REST API, Heroku, Docker.

## ACTIVITIES & INTERESTS

**Teaching Assistant,** Computer Networks September 2020 - January 2021

- Lead group discussions on lecture material. Hosted debugging sessions for assignments. (C, Go, Python)

**Careers Chair,** Princeton Association for Computing Machinery (ACM) March 2019 - March 2020

- Held mock interviews for ACM members. Organized on-campus corporate recruiting events and tech talks.

**Interests:** breakdancing, journaling, cooking, finding good lo-fi hip hop on YouTube