

Michael Ryan

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EDUCATION

Georgia Institute of Technology - Atlanta, GA

AUGUST 2019 - MAY 2024

- Bachelor of Science in Computer Science (May 2023)
- Concentrations: Artificial Intelligence and Systems/Architecture
- Current GPA: 3.95/4.0

RESEARCH EXPERIENCE

An Empirical Survey of Multilingual Text Simplification: Resources and Methods

Michael Ryan, Tarek Naous, Wei Xu | Under Review

- Identified, collected, and analyzed 24 monolingual parallel simplification corpora across 11 different languages.
- Revealed the best practices for training a text simplification model in low resource languages through experimentation.

Facial Composite Generation from Natural Language Text Descriptions using Stacked Generative Adversarial Networks

Michael Ryan | AP Research (5/5 Score)

- Combined NLP and generative adversarial networks to generate images of faces from text descriptions using Pytorch.

Cloud Computed Machine Learning Based Real-Time Litter Detection using Micro-UAV Surveillance

Ashley Chung, Dong Young Kim, Ethan Kwok, Michael Ryan, Erika Tan, Ryan Gamadia | 2018 MIT IEEE Undergraduate Research Conference

- Integrated several ML algorithms into an ensemble method for detecting litter from drone footage using Python and Tensorflow.

WORK EXPERIENCE

NLP X Lab - Dr. Wei Xu, Atlanta, GA - Research Assistant

DECEMBER 2020 - PRESENT

- Researched and authored works on multilingual text simplification and multilingual readability measurement.
- Organized and led a biweekly undergraduate reading group.

College of Computing, Atlanta, GA - Introduction to AI | Head TA

JANUARY 2021 - PRESENT

- Guided 1,633 students in studying Intro to AI over 4 semesters.
- Interviewed, led, and delegated tasks to 26 Teaching Assistants.
- Designed study materials and held project review sessions.

Microsoft Corporation, Seattle, WA - Software Engineer Intern

MAY 2022 - AUGUST 2022

- Designed and programmed static analysis tool in C++ for identifying security vulnerabilities throughout Windows OS.

MAY 2021 - AUGUST 2021

- Refactored existing codebase from .NET Framework to .NET Core.
- Ported server-specific architecture to serverless functional units using Azure Durable Functions.

Uber Technologies, Inc., Virtual - Software Engineer Intern

MAY 2020 - AUGUST 2020

- Implemented end-to-end testing in GoLang for bike, scooter, and moped rentals by building a simulated 3rd party CRUD API.

SKILLS

PROGRAMMING

- **Python:** Machine Learning, PyTorch, Tensorflow, OpenCV
- **Azure:** Function Apps, ARM templates, CI/CD, KeyVault, etc.
- **C, C++, C# (.NET Core):** Microcontrollers, Systems
- **GoLang:** Fx, Microservices
- **Java:** Swing Applications
- **JavaScript:** React, NextJS, NodeJS, Gatsby, ExpressJS
- **Arduino**

FOREIGN LANGUAGE

- **Spanish:** NJ Seal of Bilingual Proficiency

PROJECTS

Umifeeds Food Insecurity App

Programmed React frontend and Node backend for a mobile app to match food surplus donors with food insecure recipients.

Knock Knock (HumorBot)

Fine Tuned GPT-2, LSTM, and RNN on reddit jokes dataset and evaluated on humor. Trained classifier to identify offensive jokes.

Sign Assist

Built digital American Sign Language interpreter using Xbox Kinect and C#.

ACTIVITIES

Bits of Good

Senior Developer (Spring 2020-PRESENT)

Developing web applications using NextJS and React for non-profit partners. Interviewing applicants.

GT Honors Program Leadership Council

Member (Fall 2019-Spring 2022)

Guiding and mentoring incoming honors students at Georgia Tech.

RELEVANT COURSEWORK

- Natural Language Processing
- Machine Learning
- Computer Vision