

Raphael Gontijo Lopes

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EDUCATION

Georgia Institute of Technology - Computer Science

August 2014 - May 2018 (expected)

- GPA: 3.95 (4.0 CS)

Stanford's Coursera - Machine Learning MOOC by Andrew Ng

Feb 2015 - May 2015

SKILLS

- **Machine Learning**, Artificial Intelligence, Algorithms, Web
- **Python**, Java, Dart, Swift, JavaScript, C
- **TensorFlow**, scikit-learn, NLTK, pybrain, jQuery, Angular, mongoDB

WORK EXPERIENCE

Google - *Software Engineer Intern* - Google Adwords

May 2016 - Aug 2016

- Created tools for advertisers to visualize statistics about their ads in Adwords at a glance
- Developed protobuf translators in the Java backend; graphing and UI in the Dart/Angular frontend

Google - *Engineering Practicum Intern* - Google Analytics

May 2015 - Aug 2015

- Automated the bookkeeping, and visualization of test coverage information of Google Analytics' jobs
- Used tools such as Bigtable, Proto buffers, Borgcron, Dremel, PyUnit, Google Message Routing Protocols

ADAM Lab - *Undergraduate Research Assistant*

Fall 2015

- Prototyped a web tool for collecting data from YouTube videos of test users' level of attention during play
- Created and managed Node.js/mongoDB backend for the Drawing Apprentice research project

PROJECTS

Buzzmobile

github.com/gtagency/buzzmobile

Mar 2016 - Present

- Autonomous vehicle used as a parade float
- Developed reactive control system in C++ and Python using ROS and OpenCV

Monte Carlo Tetris Bot

github.com/gtagency/tetris-python

Sep 2015 - Jan 2016

- Competitive tetris-playing bot for online competition, using Monte Carlo Tree Search to make decisions.
- Implemented MCTS, with 'relaxed' evaluation functions, as fallback alternatives to vanilla MCTS.

140 M.D. (MHacks Refactor)

github.com/iRapha/140_MD

Mar 2016

- Probabilistic sleep schedule prediction, based on a user's tweet history
- Calculated Poisson Distributions using timestamp data from twitter, and approximated sleep/wake times
- Used D3.js + flask to visualize the results

Pretty Graphs

github.com/gtagency/graph-reduction

Feb 2015 - Apr 2015

- Python module that finds prettiest configuration of a graph using Simulated Annealing and SGD
- Implemented the Simulated Annealing and Gradient Descent algorithms, and heuristics for cost function
- Designed and created a wrapper for the algorithm for developer ease of use

Conn Wars (Ludum Dare 30)

github.com/GTludumDare/ludum-dare-30

connwars.com

Aug 2014

- Online minimalistic strategy game about conquering the galaxy
- Created majority of game logic, as well as interface for the game A.I.
- Designed the game's UI and created all visual graphics

Text Simplifier (MHacks V)

github.com/RobertoTakesMHacks/TextSimplifier

Jan 2015

- Chrome extension for simplifying the text of the current web page
- Created the semantic trees from raw text, using python's nltk NLP library
- Designed the logic of removing branches from the semantic tree to maximize text understanding

LEADERSHIP/ACTIVITIES

Vice President / Internal Operations Officer of the A.I. club at Georgia Tech (The Agency)

Dec 2015 - Present

Vice President of Undergraduate Council at the Georgia Tech College of Computing

May 2016 - Present

Operations Organizer of HackGT (Georgia Tech's hackathon)

Oct 2015 - Present

Sailing with the Georgia Tech Sailing Club

Feb 2015 - Present