

Raphael Gontijo Lopes

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github.com/iRapha

raphagl.com

EDUCATION

Georgia Institute of Technology, Atlanta, GA, USA

August 2014 - May 2018 (expected)

- GPA: 3.93. Major GPA: 4.0. Candidate for Bachelor of Science in Computer Science

Stanford's Coursera - Machine Learning MOOC by Andrew Ng

Spring 2015

SKILLS

Programming Languages: Python, Java, JavaScript (+ Node.js), C, Swift, HTML5, CSS, PHP, SQL

External Libraries: tensorflow, nltk, pybrain, express, jQuery, MongoDB

Spoken Languages: English (fluent), Portuguese (fluent / native speaker)

WORK EXPERIENCE

Google - Engineering Practicum Intern - Google Analytics (Mountain View)

Summer 2015

- Automated the collection, bookkeeping, and visualization of test coverage information of Google Analytics' jobs.
- Used infrastructures such as Bigtable, Proto buffers, Borg(cron), Dremel, PyUnit, Google Message Routing Protocols.

ADAM Lab - Undergraduate Research Assistant

Fall 2015

- Helped create and manage the node.js/mongoDB backend infrastructure for the Drawing Apprentice research project.

PROJECTS

Monte Carlo Tetris Bot

Fall 2015

- Battle bot that plays tetris against opponents at theaigames.com, using Monte Carlo Tree Search to make decisions.
- Implemented MCTS, using the tetris game board as states.
- Introduced and implemented the idea of 'relaxed' evaluation functions, as fallback alternatives to vanilla MCTS.
- Optimized search to only expand states when they're visited (40x performance boost), and to evaluate any state in linear time.
- Source - github.com/gtagency/tetris-python

140 M.D. (MHacks Refactor)

Spring 2016

- A sleep schedule checkup, based on your tweets. We predict when you go to bed/wake up, and how that affects your mood.
- Calculated the Poisson Distributions using noisy timestamp data from twitter, and used it to approximate sleep/wake times.
- Used D3.js + flask to visualize the results.
- Source - github.com/iRapha/140_MD

Pretty Graphs

Spring 2015

- Python library that uses simulated annealing and gradient descent to find the most visually appealing configuration of a graph.
- Implemented the Simulated Annealing and Gradient Descent algorithms, and designed the heuristics for the cost function.
- Designed and created a wrapper for the algorithm for developer ease of use.
- Source - github.com/gtagency/graph-reduction

Conn Wars (Ludum Dare 30)

August 2014

- Worked in a team to create an online strategy game in under 72h, ranked #42/1000 for "theme" and top 25% for "innovation".
- Created the majority of the algorithms facilitating game logic, as well as the functions for A.I. integration.
- Designed the game's UI and created all visual graphics.
- Playable online - connwars.com
- Source - github.com/GTludumDare/ludum-dare-30

Text Simplifier

January 2015

- A chrome extension that attempts to simplify text from the current web page for children to better understand it.
- 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 readability and understanding.
- Created the functionality of the chrome extension and connection to our NLP backend.
- Source - github.com/RobertoTakesMHacks/TextSimplifier

INPHO! (Hack ATL - Winner of "Best Open Source Hack")

November 2014

- A web app that uses location data to give the user the information of the business they are currently at. Just open the app and see the menu, specials, and interactive features. Businesses can sign up on our website.
- Developed the entire backend/database logic using JS, NodeJS, express and MongoDB, using Mongo's GeoNear feature.
- Designed and developed the entire front-end (including UI/UX) with Bootstrap, JS, and the google maps api.
- Beta available online - inphoapp.com || inphoapp.com/nearby

LEADERSHIP/ACTIVITIES

Internal Operations Officer for The Agency at Georgia Tech (The A.I. Club)

2016

Operations Organizer for HackGT (Georgia Tech's hackathon)

2016

OTHER

- Hackathon Hacking**
- Sailing** with the Georgia Tech Sailing Club