CASSIDY LAIDLAW

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cassidylaidlaw.com

EDUCATION

University of Maryland, College Park
2014 – 2018

- Computer science/math double degree, Middle East studies minor, GPA 4.00.
- Selected as one of top five graduating seniors for "academic distinction, exemplary character, and service to the campus or public communities."

SOFTWARE DEVELOPMENT EXPERIENCE

Data Scientist and Web Developer, Builda.co
November 2016 – Present

- Building an analysis pipeline for data from Fortune 500 companies using Apache Spark.
- Created a web-based mentoring platform for entrepreneurs using Django, Bootstrap, jQuery and APIs from LinkedIn, Braintree, and Office365.

App Developer, Why Weight?
March 2018 – Present

- Building an app to help clients of Why Weight, a weight loss and life coaching company.
- Implemented features to let users track their weight, connect with Bluetooth scales, log food and water intake, and message the company's life coaches.
- Writing the app in React Native with a Django backend hosted in AWS.

Insider Threat Analysis Tool, Center for Study of Terrorism and Responses to Terrorism
November 2016 – December 2018

- Built a tool to analyze insider threats in airport cargo systems with a team of three other developers.
- Implemented the user interface in JavaFX.
- Met with and presented tool to government officials in Department of Homeland Security, FBI, etc.

Other Freelance Software Development Work
June 2014 – Present

- Including data science, mobile apps, and web development.

DATA SCIENCE AND ARTIFICIAL INTELLIGENCE EXPERIENCE

Research in Adversarial Robustness
April 2018 – Present

- Developed a new framework for adversarial attacks using a functional threat model.
- Invented the ReColorAdv attack, which when combined with other attacks leads to the strongest existing attack even after adversarial training. Paper accepted to NeurIPS 2019.
- Investigating surrogate loss functions for improving adversarial robustness of neural networks.

Research at Max Planck Institute for Intelligent Systems
May 2017 – January 2018

- Improved statistical face models developed at the institute.
- Designed a protocol to capture tens of thousands of 3D scans of human faces.
- Used deep learning to model the relationship between speech and facial motion.
- Coauthored paper presented at CVPR'19, a leading computer science conference.

Intern, Booz Allen Hamilton Inc: "Rumor Has It"
January 2016 – April 2016

- Developed a social media analytics tool of my own design that I had begun in my previous internship.
- Used cutting edge data mining, machine learning, and natural language processing algorithms—some of which I designed myself—to analyze real-time Twitter data in a unique manner.

Research in Cross-Lingual Connotation
January 2016 – March 2016

- Researched differences in word connotation across languages with Prof. Marine Carpuat at the U. of Maryland.
- Worked with Google teraword n-grams and scraped news sites in multiple languages.

Intern, Booz Allen Hamilton Inc: "Twitter Polygraph"
June 2015 – August 2015

- Served as technical lead on a team that analyzed Twitter data for deceitful behavior with >95% accuracy.
- Designed methods to analyze the data using data mining, statistics, natural language processing, and machine learning.

PUBLICATIONS

Cassidy Laidlaw and Soheil Feizi. **Functional Adversarial Attacks**. *NeurIPS 2019*.

Daniel Cudeiro*, Timo Bolkart*, Cassidy Laidlaw, Anurag Ranjan, and Michael J. Black. **Capture, Learning, and Synthesis of 3D Speaking Styles**. *CVPR 2019*.

SKILLS

Programming languages and technologies: Python, C, Java, OCaml, Racket, VBA, R, PHP, WordPress, JavaScript, jQuery, Angular JS, React, React Native, Django (Python), Google Maps API, Twitter API, LinkedIn API, iOS (Objective-C and Swift), Android, AWS, Heroku, MySQL

Artificial intelligence and data science: natural language processing, classification, clustering, data cleaning and preprocessing, automatic summarization, topic modeling, statistical analysis, deep learning

Other skills: graphic design, video editing, 3D modeling, animation

HONORS AND AWARDS

University of Maryland University Medal Finalist: selected as one of five finalists for the highest honor that the university can bestow on an undergraduate student based on the criteria of "academic distinction, exemplary character, and service to the campus or public communities."

Gemstone Honors Program Most Valuable Team Member: selected as the student who contributed most to his/her research team out of all students in my honors program.

Banneker/Key Scholarship: the University of Maryland's most prestigious scholarship.