DAVID HEINEMAN

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EDUCATION

Georgia Institute of Technology   Expected 2024
B.S. in Computer Science
GPA: *3.77*, **Department GPA:** *4.0,* Faculty Honors
Coursework: Low-level Computer Architecture, Computational Ethics, Machine Learning, Data Structures & Algorithms
Teaching Assistant for CS 3510 (Design & Analysis of Algorithms)

EXPERIENCE

Software Engineering Intern | Patientco   Summer 2021
- Developed new approaches for predicting the likelihood of bill payments, achieved a higher performace compared to equivalent competitors' models
- Used AWS Sagemaker to productionalize models to re-train and label *500,000* unique bills daily (*5%* of U.S. healthcare bills)
- Prototyped a novel approach for predicting anomolies in insurance billing through modifying sequence algorithms to decrease errors in insurance adjudication for patient bills
- **Tools:** *Python, Tensorflow, Keras, AWS Sagemaker, Horvorod, Docker, SQL, Apache Airflow*

Research Assistant | Georgia Tech Natural Language Processing Lab   2020 - Present
- Developed server and API endpoints to evaluate phrase-level text simplification models on full webpages
- Working under an NSF research grant, created a front-end interface to gather phrase-level simplification data for comparing the efficacy of text simplificaiton models
- Implemented efficient lookup algorithms for large n-gram datasets using KenLM allowing for real-time predictions
- Led bi-weekly discussions of recent NLP research
- **Tools:** *Python, Flask, Prostgres, JavaScript, Chrome Developer Tools*

Independent Researcher | Lassiter AP Research Cohort   2019 - 2020
- Performed a literature review on Natural Langauge Processing research, and implemented 12 novel essay grading models to measure their performace on a standarized dataset
- Deployed a web app through AWS allowing users to write, have esssays graded, and compare performance between essay grading models
- Publically avaliable at davidheineman.com/comparison-aes.pdf
- **Tools:** *Python, PyTorch, Scikit-learn, Django, TensorFlow*

Platform Team Member | Fake News Detection Team, Big Data Big Impact 2021 - Present
- Created a web scraping API to efficiently get contents of news articles related to a claim, allowing a 10x increase in the amount of data which could be queried for real-time predictions

PROJECTS

Hashtag Segmentation API
- Developed a Flask server to allow real-time batch hashtag segmentation
- Created front-end website to explain hashtag segmentation and demonstrate the tool
- **Tools:** *Python, Flask, Tensorflow, JavaScript*

Face Alignment Tool
- Personal project, uses Python's PIL, OpenCV and open-source face recognition libraries to center a person's face in the middle of a frame and generate a timelapse of the person aging

Proselect Corporate Webpage Overhaul
- Overhauled front-end look for ProSelect's job aquizition tools, consolidated information into a minimalist, modern design and designed new marketing materials, including logo

AWARDS

- Eagle Scout
- Top UserStyles.com Contributor (20,000 Installs)
- Area 9 & Atlanta Area Council Venturing Leadership Award

SKILLS

Languages: Python • SQL • JavaScript • C • Java • Git • Docker • PHP

Tools: TensorFlow • Keras • PyTorch • Pandas • NumPy • Horvorod • Flask • PostgreSQL • Apache Airflow • Vue.js • Tailwind • AWS Sagemaker, EC2, Athena • Agile