Daniel Woldegiorgis

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Education

Williams College, Williamstown, MA — June 2020

Bachelors of Arts, Computer Science

- Relevant Coursework:
  - **Computer Science**: Algorithmic Problem Solving with Robots, Data Structures and Algorithms, Design and Analysis of Algorithms, Computer Organization, Theory of Computation, Human Computer Interaction, Parallel Processing, Functional Application Development, Storage Systems, Applied Algorithms
  - **Math/Stat**: Statistics and Data Analysis, Regression and Forecasting, Multivariable Calculus, Linear Algebra, Discrete Mathematics, Abstract Algebra, Probability, Graph Theory, Catching Robbers and Spreading Information (Senior Research Seminar)

Saint Joseph High School — June 2016

- Graduated with High Honors, GPA **4.0/4.0**

Employment Experience

GolemanEI - ***Full Stack Engineer*** — June 2020 - present

- Working on an assessments application for Web, Android and IOS using React and React Native.
- Created an Admin and User dashboard with interactive visualizations that utilize D3.js from scratch.

Service Management Group - Kansas City, MO, ***Associate Data Science Intern*** — January 2020 - February 2020

- Built a Named Entity Recognition (NER) Machine Learning model that was deployed into production.
- Used Deep Learning models to improve existing NER model from 80% to 95% F1-Score.

Williams College - Williamstown, MA, ***Peer Tutor*** — September 2018 - June 2020

- Helped students understand the course material in CS 134, CS 136, STAT 201, and MATH 250.

Research Experience

Williams College - Williamstown, MA, ***Research Assistant*** — June 2018 - August 2018

- Implemented the DBSCAN (Density-based spatial clustering of applications with noise) algorithm using the KD-Data structure for faster neighborhood queries. By doing so, the time complexity of each neighborhood query changed from linear time to logarithmic time.
- Used C++ and OpenMP to parallelize the computation significantly reducing the processing time.
- Furthermore, implemented ST-DBSCAN: an algorithm to determine spatial and temporal similarity among events for clustering tasks.

Projects

Firestone — September 2019 - Present

- A clone of the popular online card game called Hearthstone. Built in Clojure.

Edge Detection — November 2019 - December 2019

- An implementation of an edge detector that uses the Sobel Convolution Kernel to obtain changes in intensity of images. Optimized the expensive convolution operation for GPU using CUDA. Built in C.

JScribe — July 2019 - August 2019

- A turing-complete programming language with tail call optimization and dead code elimination. Built in Javascript.

WAVE (WArm Virtual Emulator) — April 2019 - May 2019

- Built an emulator that loaded ARM instructions into the memory of an Intel x-86 processor with a focus on reducing memory footprints and number of instructions executed in simulating programs. Built in Assembly.

Skills

- **Proficient:** C, JAVA, R, HTML, React, Redux, Javascript, Python
- **Familiar:** GraphQL, Clojure, Rails, CSS, LaTex, Scrum, ML, Jira, SQL, CI/CD, GCP, AWS, Puppeteer
- **GCP Badges**: Create and Manage Cloud Resources, Insights from Data with BigQuery, Deploy to Kubernetes in Google Cloud, etc.