

ETHAN "DUKE" HILL

Computer Science Student @ Virginia Tech

CONTACT INFORMATION

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PERSONAL PROFILE

Adept Software Developer skilled at technical leadership, communication, and planning. Expert in Java OOP and algorithms as well as general web development. Efficient and reliable problem solver. Proud team player focused on achieving project objectives with speed and accuracy. Can quickly learn and master new technologies while working in both team and self-directed settings. School and work experience includes designing and building apps, optimizing programs, and validating/testing code. Seeking to use proven skills in programming and project management to become a valued team member and future team leader.

EDUCATION

Virginia Polytechnic Institute and State University, Bachelor's of Science,
Studying Computer Science, Minor in Math
08/2019 – present
Blacksburg, United States
In-Major GPA: 3.88
Overall GPA: 3.67

RELEVANT COURSEWORK

Computer Organization I/II
Computer Systems
Calculus of a Single Variable I/II
Multivariable Calculus
Intro to Discrete Math
Data Structures and Algorithms
Intro to Linear Algebra
Intro to Differential Equations
Cloud Software Development
Comparative Languages
Professionalism in Computing
Applied Combinatorics
Cryptography
Intro to Artificial Intelligence
Intro to GUI Programming and Graphics

SKILLS

- Java
- Python
- C
- JavaScript
- Angular
- React
- Flask/REST
- Linux
- Bash
- SQL
- MongoDB
- Adobe Photoshop
- TypeScript
- NodeJS

ACTIVITIES/PROJECTS

• SuperDARN Virginia Tech Website

- Fully wrote and currently maintaining a new website for the SuperDARN Lab at Virginia Tech. Python based webserver using Flask in cooperation with Jinja2 and Javascript for HTML/CSS. Website hosts plotting utilities for lab data and news. Queries global lab data and creates visualizations for research/publication purposes.

• WhatsApp Message and Data Analyzer (Java/Python)

- Program that runs an efficient data analysis on WhatsApp chats. Data visualization for message times, senders, responders, etc.

• Corporate News/Media Release Analyzer

- Flask REST app which makes use of Google Cloud Platform libraries such as Natural Language Processing and Datastore to analyze sentiment, themes, social and environmental topics, translation differences, and structure of company news releases for use in comparison to corporate competitors. Data is web scraped, processed by NLP, sent to the GCP datastore, and retrieved and graphed in a Jupyter Notebook.

• MIPS Assembler Remake (C)

- MIPS Assembler remade in C. Breaks down assembly instructions into machine code. maintains registers and other data, etc.

RELEVANT PROFESSIONAL EXPERIENCE

TDI Analyst Intern (Software Development) @ Deutsche Bank

Cary, NC (May 2022 - August 2022)

- Worked as a member of Deutsche Bank's dbSleuth (Trade Surveillance) team. Created Flask REST endpoints to query (using SQL) and process account/transaction data as well as React components and containers to display said data, and everything in between including testing. Gained experience in a team environment using Jira and Git.

- Lead an intern team in creating an application to analyze DB press releases using Google's Natural Language Processing API based on sentiment, themes, topics, etc. for use by the bank in refining releases.

Research Assistant (Software Development), SuperDARN Lab @ Virginia Tech (May 2021 - May 2022) (August 2022 - Present)

- Full stack development for the SuperDARN Lab at Virginia Tech. Main project is the website (see above). Other work includes writing and working with data analysis/plotting software.

Law Clerk, Eisenberg Law Office (February 2019 - August 2019)

- Used Hazel to maintain and update files and databases, including personnel records and financial reports.

- Updated firm's database with new information, including policies, client records and financial documents.

Multimedia Editor, RDH Magazine

- Various different freelance photo editing jobs for popular dentistry blog/magazine Registered Dental Health (RDH) Magazine.

PUBLICATIONS

Co-Author - Listening to the magnetosphere: How best to make ULF waves audible (Published in Frontiers)

- NASA Citizen Science project in cooperation with Imperial College London, Boulder Space Science Institute, and University of California

- Worked with other programmers and scientists to combine algorithms used to batch process NASA satellite data into sound waves