# DANE WILLIAMS

dwilli36@nd.edu | danewilliams.me | 425 988 4749 linkedin.com/in/danerwilliams | github.com/danerwilliams

#### **Education**

**University of Notre Dame** 

Notre Dame, IN

Aug. 2018 - May 2022

B.S. Computer Science, College of Engineering

- Cumulative GPA: 3.73/4.0, Major GPA: 3.86/4.0
- Relevant Coursework (Completed): Data Structures & Algorithms, Systems Programming, Discrete Math. Logic Design, Computer Architecture
- o (Fall 2020): Compilers & Language Design, Theory of Computing, Programming Paradigms, Case Studies in Computing Entrepreneurship

**Eastside Catholic School** 

Sammamish, WA

Aug. 2014 - May. 2018

Salutatorian; GPA: 3.99/4.0

# **Experience**

AT&T

Technology Development Program Intern

San Ramon, CA

Contributed to AT&T Labs research in detecting 5G network anomalies:

Jun 2020 - Aug 2020

- - o Developed a python application for centralizing virtual network function data with an Apache Pulsar message bus (similar to Kafka)
  - o Processed data with python and Apache Flink data stream computation engine (similar to Hadoop and Spark)
- o Scrum master and full stack developer among a team of interns which built a MERN stack (Mongo, Express, React, Node) application for improving student engagement in online classroom environments

Symetra Bellevue, WA

Cloud Intern May 2019 - Aug 2019

- Gathered and visualized over 20,000 network infrastructure related data points by writing various python scripts which drove strategy leading to over \$50k in monthly circuit savings
- Automated invoice processing with python, boto3 SDK, AWS Machine Learning: Textract (Optical Character Recognition) and Comprehend (Natural Language Processing), as well as other AWS services: SQS, SNS, and S3

#### Notre Dame Chaoli Wang Lab

Notre Dame, IN

Data Visualization Researcher

Aug 2020 - Present

- Researcher under Dr. Chaoli Wang working with D3.js javascript data visualization libraries
- Designing and building visual analytical tools of Notre Dame student learning data with the goal of helping close academic performance gaps which result from disparities in student backgrounds

#### **Notre Dame Venture Capital**

Notre Dame, IN

Investment Associate

Aug 2019 - May 2020

- Selected to take part in a small group of Notre Dame students who invest university endowment funds in seed stage startups
- Worked with a team of 4 students + Notre Dame alumnus at Pivot North Capital in Menlo Park, CA to create investment proposals

### **Projects**

- Tmux Dracula Theme: Open source maintainer and contributor for the official Dracula Theme, github.com/dracula/tmux
  - Developed a tmux (terminal multiplexor) extension from scratch in shell which was accepted to the official dracula theme: draculatheme.com/tmux
  - Used API's, webscraping, and Unix pipelines to gather network, power, weather, and date/time data to display in tmux status bar.
  - o Commit code, merge pull requests, perform code reviews, and manage issues (bugs, feature requests, todos) for the project.
  - Project averages over 100 unique clones per week and has attracted several contributors from different countries around the world
- Pork Chop Chat Bot: An AI chat bot written in python, github.com/danerwilliams/pork-chop
  - o Developed a groupme chat bot in python that participates in conversation as well as responds to custom command modules.
  - Runs on a Flask server and can be trained for conversation from a custom csv dataset or other corpus files using the ChatterBot module.
- Spidey Web Server: A simple http web server written in C
  - o Developed a simple http web server in C similar to Apache or Nginx, with both single and concurrency modes
  - Deployed server to an AWS EC2 virtual machine, available for demonstration at aws.danewilliams.me:9898

#### Activities & Awards

# Notre Dame Men's Water Polo

Notre Dame, IN

Nationals Qualifier, Conference Champion, Elected Team Officer

Aug 2018 - Present

Washington Athletic Club 101 Scholar Athlete

Seattle, WA May 2018

Award Recipient

### Certifications

- The University of Texas at Austin: Think Before You Design Think
  - UT Austin coursework offered at AT&T on utilizing design thinking principles to develop customer centered engineering and business solutions

# **Skills**

Languages: Python, C++, C, Shell, Verilog, Java, HTML/CSS, ARM Assembly

Technologies: Linux/Unix, AWS, Git