Logan Ayliffe

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EDUCATION

University of Pennsylvania, School of Engineering and Applied Science — **Philadelphia, PA** **May 2021**
Master of Computer and Information Technology | GPA: 3.59 / 4.00
Coursework: Database and Information Systems, Programming for the Web, Big Data Analytics,
Natural Language Processing, Algorithms and Computation, Advanced Programming
Founder, MCIT Student Organization | Founder, Annual MCIT Hackathon

University of Pennsylvania, College of Arts and Sciences — **Philadelphia, PA** **May 2021**
Bachelor of Arts in Cognitive Science: Computation and Cognition | GPA: 3.81 / 4.00
Summa Cum Laude | Dean's List

SKILLS

Languages: Python, Javascript, Java, C, C++
Databases: SQL, MongoDB, Neo4j, GraphQL
Platforms: AWS, Visual Studio, Eclipse, Github

Web: HTML/CSS, React, Node, Express, Bootstrap
Tools & Libraries: Git, sklearn, pandas, Travis CI, Postman
Design: Figma, Adobe Photoshop, Illustrator, InDesign

SELECTED PROJECTS

Can Twitter predict US county-level excessive alcohol consumption? — **2021**
pandas, python, sklearn | GitHub
- Collaborated in a team of 3 to implement published ridge regression ML model which uses NLP derived features from dense, high dimensional Twitter data to predict excessive alcohol consumption.
- Experimented with various methods of dimensionality reduction to improve model performance.
- Designed and implement feed-forward neural network to replace prior model yielding significant improvement in both Pearson R and mean absolute error.

Predicting COVID case rate change by US state using Big Twitter Data — **2021**
pandas, python, sklearn, nltk | GitHub
- Collaborated in a team of 3 to extract, transform, and load large Twitter datasets for use in multiple ML models using Academic Research Twitter API endpoints.
- Designed and constructed ML model using TF-IDF scores for ngram usage in COVID related tweets by US state.
- Experimented with baseline extensions and improved model performance to accurately predict percent change in COVID-19 case rates based on ngram scores.

SoundtrackSurfer — **2021**
react, express, node, mysql, amazon RDS, spotify API
- Single-page application which explores film soundtracks, intelligently recommends relevant artists / films / songs, and plays embedded spotify tracks.
- Primary responsibilities include react frontend, advanced database query optimization, and spotify integration.

PennPals — **2020**
react, express, node, mongodb, twilio, figma | GitHub
- Collaborate in a team of 3 to design and create a WhatsApp clone using MERN stack and Twilio Conversations API
- Design and develop messaging and multiple party audio and video chat functionality built on top of the Twilio Conversations API.
- Primary project manager for the team using agile methodology and GitHub Projects.

Professor59x — **2020**
python, tweepy, flask, heroku | GitHub
- Design and develop twitter bot for the University of Pennsylvania CIT59x student group.
- Monitor Penn related tweets, interact with Penn community online, post fair-use Penn images from official Penn flickr account.

PROFESSIONAL EXPERIENCE

University of Pennsylvania, Department of Family Medicine and Community Health — **Philadelphia, PA** **2016 -- 2021**
Business Administrator, Financial Data Analyst
- Increased average healthcare worker productivity by 14% by implementing practice-wide business intelligence dashboards for 30+ primary care, inpatient, and obstetric providers leading to significant top-line revenue growth four fiscal years in a row.

University of Pennsylvania, National Center for Integrated Behavioral Health — **Philadelphia, PA** **2016 -- 2021**
Lead Technical Project Manager
- Leverage $14M in federal sponsored projects dollars to fund interdisciplinary team of high level stakeholders in creating Center brand identity, website, social media strategy, and style system leading to acquisition by MAYO Clinic researchers.