Griffin Burke

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Education

University of Illinois Urbana-Champaign Expected: May 2027
Bachelor of Science in Computer Science, Minor in Mathematics *GPA: 4.00*

Relevant Coursework: Numerical Methods • Data Structures and Algorithms • Software Design Lab
During Spring 2025: Data Science Discovery • Prob and Stats for Computer Science • System Programming

Honors: Grainger Engineering James Scholar • National Merit Scholar Finalist

Technical Skills

Languages: Python, C++, C, Java, Kotlin, TypeScript, Rust, HTML/CSS/JS
Libraries: Keras, Ultralytics, Scikit-learn, NumPy, pandas
Frameworks: React, React Native, React Redux Toolkit, Flask

Professional Experience

Kashmir World Foundation Remote
Machine Learning Engineer Intern *September 2024 – Present*

Rainforest Initiative

- Annotated over 1200 trail cam images with bounding boxes to identify species present
- Trained and analyzed the performance of different sized YOLO models on computer vision for different species
- Fine-tuning the optimal base model with parameter sweeps and dataset modification

Bioacoustics Project

- Compiling a literature review of the current state of bioacoustic modeling, specifically with bird vocalizations
- Conducting exploratory data analysis on relevant datasets of bird vocalizations
- Exploring potential applications of CNN, CRNN, and transformer architectures for detecting relevant bird species

Involvement

Project: Code February 2024 – Present
Project Manager *September 2024 – Present*

- Leading a team of 14 on a project called CompanyMatch, a website that will utilize HuggingFace sentence transformers to recommend companies to users based off of their preferred company values and culture

Developer *February 2024 – May 2024*

- Built and designed the front-end of the web page and developed two neural networks for sentiment analysis
- Collaborated with a group of 12 over two different teams to build the UIUC Involvement Bot
- Managed deadlines, covered for other members, and worked around each other's schedules

Project Highlights

UIUC Involvement Bot | *Python, Flask, Keras, HTML/CSS/JS, SQLite* February 2024 – June 2024
Text Analysis and Full Stack Development *github.com/gjburke/finishing-involvement-bot*

- Utilized a full stack of languages and tools to develop a club recommendation website for University of Illinois students based on what the user is interested in
- Developed, trained, and tested two Keras neural network models with multiple LSTM layers to take a user's description of their interest, determine its category and intensity level, and display corresponding clubs

College Spam Detector | *Python, Scikit-learn, Gmail API* May 2020 – August 2022
Content Classification and API Integration *github.com/gjburke/college-email-detector*

- Implemented the Gmail API and an SVM (Support Vector Machine) through Scikit-learn in an application that reads through user's emails and labels them if they are college spam emails
- Engineered the process of tokenizing, stemming, and vectorizing emails using NLTK in order to process emails from the Gmail API, including more than 500 hand-picked training emails
- Achieved greater than 95% accuracy for the SVM on the validation dataset