Sarthak Agrawal

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EDUCATION

University of Wisconsin - Madison   Madison, WI
B.S. in Computer Science, Economics, Math   *Sept. 2022 – May 2025*
- GPA 3.97/4.0

University of Minnesota - Twin Cities   Minneapolis, MN
Dual Enrollment   *Sept. 2021 – May 2022*

EXPERIENCE

Sciece of Ethically Augmented Learning Lab   September 2023 – Present
UW Madison Research Assistant   *Madison, WI*
- Designed feature vectors for students to predict course completion using time-series interaction data
- Optimized logistic regression for fairness using a machine learning auditing algorithm
- Analyzed false positive rates to explore inter-sectional bias against marginalized subgroups and reported findings

Splunk   May 2023 – August 2023
Software Engineer Intern (SRE)   *San Jose, CA*
- Built and deployed a Go service to automate updates to a CUJ (Critical User Journey) status page
- Performed analysis on time-series metrics from Cortex and SignalFx using PromQl and SignalFlow
- Created SLOs (Service Level Objectives) utilizing user feedback from interviews to design a page for 3000+ users
- Wrote jsonnet to dynamically fetch cluster information to deploy to multiple production clusters
- Utilized Goroutines and channels to run concurrent jobs for different environments
- Created a Kubernetes init container to dynamically map changes to a config map to the production status page

Optum (United Health Group)   June 2022 – August 2022
Software Engineer Intern   *Eden Prairie, MN*
- Developed and deployed Spring Boot microservice to a Kubernetes pod using a Jenkins pipeline
- Designed monitoring dashboards using Splunk and Dynatrace for 22+ critical production microservices
- Created infrastructure code in Groovy to deploy production-ready APIs with monitoring to Kubernetes

Codeucate   July 2020 – Jan. 2021
Software Developer Intern   *Remote*
- Designed and built a Natural Language Processing (NLP) chatbot trained with FAQs to help answer customer questions using libraries includingsklearn and nltk
- Developed a website in a team setting using django for backend and postgres

PROJECTS

Quizzify | *ReactJS, Chakra UI, Flask, Python, Hugging Face, Transformers*   Jan 2023 – May 2023
- Fine-tuned a T5 Decoder model in Hugging Face for quiz question generation
- Built a pipeline of different transformer models including CountVectorizer, BERT, and Sequence Transformer
- Designed a backend API using flask to support CORS
- Won 1st place for the LLMs project category in UIOWA Hackathon

EPHS Maps | *Swift, SwiftUI, Python, PhotoShop, Git, Xcode*   Jan. 2022 – June 2022
- Created a GPS-like app for my school to help new students, parents and teachers navigate the complex school
- Coded a custom implementation of A star algorithm in Swift for shortest path between rooms on multiple floors
- Designed and built simple user interface combining SwiftUI and UIKit to create clean transition animations
- Wrote python scripts for testing and integrating the school's layout and design into the app
- Successfully pitched app to school leadership and have over 1000 downloads with school sponsorship and promotion

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, JavaScript, HTML/CSS, Golang, Jsonnet
Frameworks: React, Node.js, Django, SpringBoot, SwiftUI, SpriteKit, Combine, UIKit
Developer Tools: Git, Docker, Kubernetes, Dynatrace, Splunk, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse, Xcode, Azure, SignalFx, Cortex, Prometheus
Libraries: scikit-learn, pandas, NumPy, Matplotlib, nltk