

# Arijit Chakma

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## Skills

**Languages:** Python, Go, Javascript/Typescript, Java, C/C++, SQL, HTML/CSS, Bash

**Technologies:** AWS, React, Redux, LangChain, MongoDB, PostgreSQL, Supabase, Git, Pandas/Numpy

**ML & CV Technologies:** Tensorflow, Sklearn, OpenCV

## Experiences

**Drexel University College of Engineering**

Philadelphia, PA

**Undergraduate Researcher**

Sep 2024 - Present

- Implemented and evaluated multiple machine learning models (KNN, SVM, Logistic Regression, RandomForest) to classify different traffic signal plans at intersections achieving around **90%** accuracy.
- Currently working on a paper to develop a novel **weighted-KNN** approach tailored for classifying traffic signal plans at intersections.

**Bristol Myers Squibb**

Princeton, NJ

**Cloud and Software Developer Co-op**

Apr 2024 - Sep 2024

- Designed and implemented **5+** ETL workflows using AWS **Step Functions**, automating data processing for **10,000+** employees and improving accuracy by **70%**
- Automated **LucidChart** user de-licensing for **1,250+** users and **450+** licenses using Puppeteer and AWS **Lambda**, ensuring efficient access management.
- Built a **React** and **TypeScript** frontend for AWS **DataZone** user de-licensing, integrated with AWS **API Gateway**, reducing processing time by **80%**.
- Wrote a **Python** script to extract **cross-access** user data from **DynamoDB** and load it into AWS **Athena**, enabling efficient querying and analytics.
- Integrated AWS **Glue Crawlers** to automatically detect schema changes and update **ETL** pipelines, ensuring seamless and real-time data ingestion.

**Develop For Good**

Virtual

**Software Engineer**

May 2024 - Aug 2024

- Developed language-based event filtering features for art events using **React** and **TypeScript**, while enhancing login security through Firebase authentication.
- Helped in migration of **2000+** lines of **JavaScript** to **TypeScript** and implemented **Chakra UI** components, resulting in a **40%** reduction in bugs and improved code maintainability

## Projects

**SkyHigh** | Streamlit, OpenCV, Flask, Llama LLM, OpenAI vision

[Link](#)

- Designed and developed a low-cost, AI-powered frisbee robot that collects and analyzes rescue data mid-flight using sensors, a multi-agent AI system, and a Streamlit-based visualization platform.

**PigeonPost** | React, OpenAI API, Flask, Google Cloud API, QdrentDB

[Link](#)

- Developed a classroom learning web app that captures lecture audio and enables real-time **RAG** queries and generates diverse study materials after lecture. It includes a gamification system with performance tracking and peer comparisons to enhance student engagement.

**Scout** | React Native, Go, MongoDB, Google Maps API

[Link](#)

- Built an **Android app** for a campus security robot, integrating **Google Maps API** for real-time **GPS** tracking during emergency detection and response.

## Awards & Achievements

**PennApps 2024 Winner:** Overall **1st** out of **105** projects at University of Pennsylvania's annual hackathon.

**HopHacks 2024 Winner:** Overall **2nd** out of **80** projects at John Hopkins University's annual hackathon.

**DragonHacks 2024 Winner:** Secured **1st** in the Interactive and Multimedia track at Drexel's hackathon.

## Education

**Drexel University** - BS in Computer Science (**GPA: 3.80/4.00**)

Expected Grad.: **June 2027**

**Relevant Courseworks:** Data Structures, System Programmings, Software Architecture & Design, Machine Learning, Applied Machine Learning, Introduction to AI