

# Jagroop Gill

Philadelphia, PA | [jsg362@drexel.edu](mailto:jsg362@drexel.edu) | 484-541-8804 | [www.jagroopgill.info](http://www.jagroopgill.info) | [LinkedIn](#) | [GitHub](#)

## Education

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**Drexel University**, BS in Software Engineering, minor in AI and Learning Sep 2022 – Jun 2027

- GPA: 3.6/4.0
- **Coursework:** Artificial Intelligence, Data Structures, Database Management Systems, Software Architecture I & II, Systems Architecture, Systems Programming, Advanced Programming Tools & Techniques

## Experience

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**IoT Engineer**, [Battery Dynamics Lab](#) – Philadelphia, PA Sep 2025 – Current

- Developed a wireless IoT data collection system using micro-controllers and a Raspberry Pi to read sensor data and publish it to an MQTT broker [[repository](#)]
- Deployed a Dockerized monitoring stack (Telegraf, InfluxDB, Grafana) to ingest, store, and visualize real-time sensor data that is visible to devices on internal network [[repository](#)]

**System Admin**, Drexel Dept of Climate & Sustainability – Philadelphia, PA Oct 2023 – Current

- Developed an end-of-life workflow for Apple iMacs, to boot a Linux environment from USB, harvest hardware data for resale, and apply specialized software to ensure secure, compliant data erasure
- Contributed to campus sustainability initiative events to promote reuse and reduce waste

**Jr. Software Engineer I**, WebstaurantStore – Lititz, PA (Remote) Mar 2025 – Sep 2025

- Co-engineered the full-stack migration of a legacy C# scrum poker app to a modern Backstage plugin, re-building it from the ground up in React, TypeScript, and Socket.io to serve 700+ developers
- Played a key role in designing the new distributed, event-driven backend, utilizing Redis for state management and enhancing features to improve real-time collaboration

**Student Researcher**, [Drexel Dept of CAEE](#) – Philadelphia, PA Oct 2024 – Mar 2025

- Supported AI-driven structural failure analysis by compiling and describing failure reports to train detection models; implemented algorithms to classify ultrasonic images and locate cracks with bounding boxes, contributing to published [research](#)

**Web Developer Co-op**, Drexel College of Medicine – Philadelphia, PA Apr 2024 – Sep 2024

- Developed application features with C#, ASP.NET, and MS SQL, creating complex queries for interactive data grids that improved workflows and data integrity through database normalization and input validation
- Responsible for checking ticket inbox and resolving user issues, or escalating as needed in a timely manner

## Projects

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### Home Server

- Built and administered an externally facing Ubuntu server on a re-purposed 2011 Apple MacBook Pro, configuring network port forwarding and user permissions to host a public Minecraft server.

### Personal Website

- Independently designed, developed, hosted, and optimized a responsive personal portfolio website using HTML, CSS, and JavaScript, incorporating user feedback to enhance its visual appeal, user experience, and cross-device compatibility

## Technologies

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**Languages:** TypeScript, Java, C#, SQL, JavaScript, C, C++, Python, Bash

**Technologies:** Docker, React, Redis, .NET, Microsoft & Postgres SQL, Arduino, Visual Studio (Code), Linux/Unix, Git, Azure, Grafana