

SHYAM BHAGAT

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EDUCATION

DARTMOUTH COLLEGE

Graduating June 2026

Double Major in Computer Science & Data Science (Bachelors)

3.62/4.00

Relevant Coursework: Object-Oriented Programming, Data Structures & Algorithms, Machine Learning & Statistical Data Analysis, Linear Algebra, Data Visualization, Multivariable Calculus

SOFTWARE DEVELOPMENT PROJECTS

CodePunk | Multiplayer Web Game | In Development

Oct 2024 - Present

C++ | TypeScript (React, Node.js)

- Built a TypeScript-based front end (React) for algorithmic puzzles and coding quizzes, delivering instant feedback (<250ms) to help college students prepare for exams.
- Optimized game logic with points, leaderboards, and adaptive difficulty tiers.
- Now integrating an AI-driven recommendation engine to provide personalized coding challenges and detailed feedback, reducing average puzzle solve time.
- Engineering a real-time lobby system and matchmaking logic in C++ that handles up to 10 concurrent players with <150ms average latency.

DartSync | Local Backup Service

Jul 2024 – Oct 2024

C++ | Windows API

- Developed a multi-threaded C++ command-line utility for incremental file backups, delivering up to 50% faster average copy times compared to single-thread.
- Implemented optional Win32 GUI for real-time progress logging and filter controls (file extension, max file size).
- Launched dedicated backup threads that run in the background to maintain a responsive GUI and minimize CPU usage, ensuring uninterrupted user interaction while copying large data sets (tested on 100GB+).

Amazon Review Predictor | Machine Learning Project

Sep 2023 – Nov 2023

Python | Machine Learning | Firebase

- Achieved 84% accuracy in classifying customer sentiment using 10,000 reviews.
- Enhanced the model's F1 score by applying hyperparameter tuning techniques (grid search, cross-validation), leading to a 44% improvement in precision and recall balance.

Singapore Solar | Mobile Application & Website

Jan 2022 – July 2022

Java | Python | Flutter

- Developed a mobile application (Java, Android Studio) and website to monitor solar panel energy production in real time.
- Integrated RESTful APIs to display solar performance metrics and implemented web-scraping backend in Python.
- Maintained 99.5% uptime for real-time monitoring; reduced API response latency by 60% through optimized queries (800ms to 300ms).

SOFTWARE ENGINEERING EXPERIENCES

UNIVERSITY OF WEST ATTICA

Athens

SWE Intern

Python | React | JavaScript | MySQL | Bash

Jun 2024 – Jul 2024

- Developed an open-source Linux driver for the LD-350 lightning detector using Python; reduced data latency by 40% through MQTT and REST APIs.
- Built a JavaScript-based frontend website that processed 500 data points/second, utilized by 25+ researchers.
- Designed a scalable SQL database to store 1 million+ meteorological records, improving average query time by 200% compared to previous solution at company.

CLEANEDGE WASTEWATER MANAGEMENT

Singapore

Data Engineer

Java | Python | SQLite | Grafana

Jun 2022 – Aug 2022

- Automated daily reports for 250+ effluent parameters by creating Java-based scripts, reducing manual entry by 80% (30 to 6 manual columns) and saving employees ~1.5 hours/day.
- Developed custom dashboards in Airtable that cut data analysis time from 40 minutes to 20 minutes per day, enabling faster identification of critical trends. Created database in SQLite.

SKILLS

Programming Languages: Python, Java, C++, JavaScript, TypeScript, SQL, R, HTML, CSS

Frameworks / Technologies: ReactJS, NodeJS, Flask, Android Studio, MySQL, SQLite, Grafana, AWS, Firebase, Docker, Linux, Git, Adobe Illustrator