Tanvir Jawad

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Projects

j-notes - Kanban Task Tracker | Personal Project

Go, Gin, SQLite, Flutter/Dart (Linux Desktop and Android)

- Built a Go/Gin REST API with SQLite write-through storage, argon2id password hashing, token-based sessions, login rate limiting, and automated daily backups
- Built a Flutter client for desktop and Android with a Kanban board, calendar view, Markdown notes with todo lists, and keyboard-driven commands
- Designed an ingest API and review Inbox for scraper and voice input with duplicate detection; covered by 2,200+ lines of Go and Flutter tests

CopOrNot - Public Safety Navigation App | HackHarvard 2025

Python, Express.js, MongoDB, React Native

- Designed a REST API with CRUD operations and wrote a polyline renderer for subway lines
- Made webscrapers to gather data for NYC and Boston's public transit systems, used automation scripts in Python to clean data and upload it to MongoDB

j-seeker - DJ Library Builder | Personal Project

Python, Spotify Web API, REST APIs, Docker, Essentia

- Built a pipeline that turns Spotify playlists (OAuth + PKCE) into a tagged local music library, with BPM and key detection via Essentia and idempotent, resumable runs
- Wrote a matcher that ranks candidate files by fuzzy title match, duration, format, and bitrate, and classifies versions with an LLM decision API plus a heuristic fallback

Procedural Bush Generator and RetroFX | Personal Project

TypeScript, Three.js (WebGL2), GLSL/WGSL, WebGPU, Bun

- Built a parametric plant editor and an importable rendering library that draws the same scenes as an animated website background
- Wrote a reorderable shader post-processing pipeline (Bayer-dithered pixel art, ASCII with Sobel edge detection, blur) and ported it to a headless WebGPU command-line image editor

Work Experience

Software Engineering Intern | Carmera May - June 2022

- Built a video timeline in Vue.js and TypeScript that cut the time fleet managers spent investigating safety incidents
- Highlighted detected hazards (hard braking, rapid acceleration, traffic violations) from vehicle telemetry data

Substitute Teacher | Chicago Public Schools (via Kokua) Jan - May 2026

- Taught pre-K through 12th grade classes in math, science, English, and history

Educator | Right At School, Chicago Jan - June 2026

- Supervised and guided K–6 students in a school-based childcare program

Counselor and Math Assistant | Wolverine Pathways, Michigan Summer 2026

- Led a group of 18 middle schoolers through a summer program and assisted the math teacher in class

Tutor | Self-employed Sept 2021 - June 2023

- Tutored middle school students during my junior and senior years of high school

Education

2023 - 2028 BS in Computer Science at **University at Buffalo**

2019 - 2023 Honors Roll student at **Brooklyn Technical High School** (GPA: 3.7/4.0)

Programming Courses: Computer Organization, Systems Programming, Algorithms and Complexity

Skills

Programming Languages:	Python, Go, TypeScript/JavaScript, Dart, Java, C++, SQL, HTML/CSS
Technologies:	Gin, Flutter, Vue.js, React/React Native, Three.js/WebGL, PostgreSQL, SQLite, MongoDB, Docker, AWS, systemd, Linux/Windows Admin, Networking and Cloud Hosting, VMs, Hardware Repair