

Adil Ahmed

adilahbabahmed@gmail.com | adilaahmed.com | linkedin.com/in/adilaahmed | github.com/adillpickles

EDUCATION

The City College of New York

Bachelor of Science in Computer Science

May 2027

New York, NY

Honors: Major GPA 3.95, Dean's List (6 semesters)

Coursework: Software Engineering, Database Systems, Operating Systems, Distributed Algorithms, Algorithms, Data Structures, Computer Security

EXPERIENCE

CUNY Tech Prep

Data Science Fellow

Aug 2026 – Present

New York, NY

- Selected for a competitive year-long program for CUNY computer science students; applying Python, pandas, and machine learning to real datasets toward a mentored demo-day project
- Won **Best Software Engineering Practices** at CTP Hacks with Lingua, a real-time translator built by a team of 4

Google

GSWEP Software Engineering Fellow

Feb 2024 – May 2024

Remote

- Selected from **600+ applicants** for one-on-one mentorship from a Google software engineer on code review, version control, and scoping ambiguous requirements into small, reviewable changes

PROJECTS

Exedra - Collaborative 3D Workspace (C++, WebGPU)

[Live](#)

- Building a browser-based 3D workspace where film and set design teams block, light, and annotate one scene live, with a C++ **WebGPU** renderer compiled to **WebAssembly** and an authoritative C++ **QUIC** server (team of 4)
- Encoded a slot index and generation counter into every QUIC Connection ID, turning per-packet peer lookup into an **O(1)** array index; the generation check rejects packets addressed to recycled slots
- Cut UDP syscalls by batching up to **256** outbound packets per sendmmsg and 32 inbound per recvmmsg, tracking partial-send offsets so retries never recopy data

Lingua - Real-Time Interpreter (TypeScript, React)

[GitHub](#) | [Live](#)

- Developed a real-time speech translation web app with the Gemini Live API in a team of 4, supporting live conversations across **79 languages** with translated subtitles, spoken readback, and summaries
- Built the browser audio engine: a custom **AudioWorklet** that captures and streams raw PCM16, with gapless playback scheduled on the Web Audio clock using a **120 ms** jitter lead
- Kept API keys off the client with single-use, short-lived session tokens issued by a rate-limited Node backend

Cadence - Social Publishing Platform (TypeScript, SQLite)

[Demo](#)

- Built a local-first desktop app that schedules and uploads short-form video across multiple TikTok, YouTube, and Instagram accounts with AI-generated captions; **733 tests**, **16 migrations**
- Guaranteed one in-flight upload per account with a single-transaction SQLite claim query using **ROW_NUMBER** partitioning, preventing double-posts under concurrency
- Encrypted per-account sessions with **AES-256-GCM** keyed from the OS keychain; uncertain publish outcomes pause the account rather than retry, since uploads are not idempotent

ClipPress - Size-Targeted Video Editor (TypeScript, FFmpeg)

[GitHub](#) | [Website](#)

- Shipped a desktop clip editor, built on the open-source LosslessCut, that exports recordings under a hard upload size limit on the first try at the best quality that fits
- Built a closed-loop encoder that sets each retry's bitrate from measured overshoot, tightening margin 0.93 to 0.82
- Added a **bits-per-pixel** feasibility gate that steps down a 1440/1080/720p and 30 fps ladder; tuned **16** AV1 and H.264 profiles (CPU and NVENC) scored by **SSIM**

SKILLS

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

Web: React, Next.js, Node.js, Express, Fastify, Flask, Electron, Tailwind CSS, REST APIs

Databases: PostgreSQL, SQLite, Supabase, schema design, migrations, transactions

Tools: Git, GitHub Actions, CI/CD, Docker, Vitest, Jest, Playwright, Linux