

# Daksh Kaul

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## EDUCATION

Rutgers, The State University of New Jersey

School of Arts and Sciences | B.S. Computer Science | GPA: 3.0/4.0

New Brunswick, NJ

September 2024 – May 2028

## TECHNICAL SKILLS

**Languages:** Java, Python, NumPy, Matplotlib, C, Rust, SQL, HTML/CSS/JS, JQuery

**Frameworks & Tools:** Linux, Git, Flutter, MySQL, Autodesk Fusion 360, Ableton, DaVinci Resolve, Office

**Specialties:** Full-Stack Development, Data Structures, DSP, Low-latency Systems, PCB design, CI/CD (WIP)

## PROJECTS & EXPERIENCE

### EarCanvas – Digital Audio Workstation

New Jersey, USA

Backend Developer

July 2025 – Present

- Built a **real-time, extensible DSP engine** in C with custom IIR filters, 9-band EQ, channel balancers, and dynamic limiters, processing **48 kHz @ 128 samples in ~0.10 ms** (<3 ms total latency).
- Integrated hybrid architecture: **Java** for orchestration, **C** for DSP, **Flutter** for dynamic UI.
- Wrote **~80% coverage unit & integration tests**, ensuring stability under high-load performance.

### Project Resonator – Open-Source IEM Development

New Jersey, USA

Engineering Lead

March 2025 – Present

- Designed a **4-balanced-armature IEM** with **4-way passive crossover**; published PCB schematics, CAD shell models, and crossover simulations.
- Authored **modular design guides**, enabling replication/modification by a global DIY audio community.

### Clamshell – Task Management Tool for Developers and Power Users

Gurugram, India

Backend Developer

June 2024 – January 2025

- Developed **Rust**-based, memory-safe task management app with **+6k downloads**.
- Implemented and built a **command-line workflow utility** in Rust to accelerate task management.
- Engineered with a **file-agnostic** approach, ideal for structured formats like **Markdown and Org mode**.

### Typr - Cross-Platform Typing Tutor Application

Gurugram, India

Full-Stack Developer

October 2023 – June 2024

- Designed an interactive typing **learning platform** to build speed and reduce RSI (repetitive strain injury) via structured lessons.
- Built with system agnostic **Flutter SDK** frontend, a unified **Python** backend codebase for backend.
- Utilized **MariaDB** for data storage and **SHA-256** hashing to safeguard user credentials.

## LEADERSHIP & EXTRACURRICULARS

### Design & Technology Club – Amity Global School, Gurugram

Gurugram, India

Co-leader and Manager

December 2022 – March 2023

- Co-designed lessons integrating visual design principles with tools like Adobe Express and Canva.
- Provided in-class support to students regarding assignments and general questions.
- Assisted in the grading and reviewing of student assignments.

### Research on Audio Compression Algorithms

Gurugram, India

Researcher, Computer Engineer

November 2023 – March 2024

- Analyzed the performance of DPCM and Mu-Law, comparing compression rates and audio clarity.
- Implemented audio compression algorithms utilizing high-level languages such as C++
- Performed data analysis regarding the audio clarity via spectrogram analysis using Python and Librosa.

## SKILLS & INTERESTS

**Awards:** Vietravel Friendship Award, Earth Saviors Foundation Volunteering Award, Amity Sci. Colloquium.

**Interests:** Programming, Quantum Mechanics/Computing, Mathematics, Physics, and Music Production.