

Selin Mutlu

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EDUCATION

Duke University

Durham, NC

B.S., Mathematics & Computer Science, Minor in Psychology; GPA: 3.93/4.0

Expected May 2028

- **Coursework:** Data Structures & Algorithms, Proofs-Based Linear Algebra, Multivariable Calculus, Advanced Probability (Fall 2026), Calculus II

PROFESSIONAL EXPERIENCE

Software Engineer Intern

May 2026 – August 2026

Magic EdTech

New York, NY

- Built **MagicBox**, an AI reference tool pulling customer stories from Salesforce into live sales conversations; scoped, shipped, and iterated against user feedback, now adopted by a **200+ person sales team**
- Co-built **Forum Intelligence**, an n8n pipeline scraping Reddit, Hacker News, and Stack Exchange through Apify and running an LLM over the results to flag go-to-market signal for product and marketing
- Identified both projects independently after observing recurring workflow friction; neither was assigned

Cognitive Neuroscience Research Intern

January 2026 – Present

Duke Institute for Brain Sciences

Durham, NC

- Program EEG experiments in PsychoPy and run preprocessing, ERP, and time-frequency analyses on N400 responses to social-norm violations across **20 participant sessions** on BioSemi hardware
- Training a sparse autoencoder on a frozen EEG foundation model to test whether learned features encode diagnosis or subject identity, auditing the model for label leakage
- Co-authored research poster *A Multi-Method Approach to Studying Vicarious Memory and Social Norms*

Financial Analyst

May 2026 – Present

Teathos

New York, NY

- Model unit economics and pricing for an early-stage RTD beverage startup across retail, DTC, and Amazon channels

PROJECTS

LiftSpot | React, MapLibre GL, Supabase Postgres, AWS (S3, CloudFront, Lambda), C++17

2026

- Built and deployed a live web app mapping accessible elevator routes, sourcing and manually verifying a **270-building dataset** across 94 Long Island towns after finding no public dataset existed; owned technical design through deployment (**62 commits, sole author**)
- Wrote a companion **C++17 CLI** for dataset validation after bad upstream records surfaced as frontend defects three layers downstream; uses union-find clustering to collapse duplicates and haversine nearest-neighbor search to flag anomalous coordinate records
- Served live building counts from Supabase Postgres through a serverless AWS backend

NormLit | Python, OpenAI Embeddings, Supabase pgvector

2026

- Co-built a retrieval assistant now used daily by ~10 researchers in a Duke neuroscience lab, using cosine-similarity search over OpenAI embeddings (~40% self-authored)
- Shipped **31 releases** against direct user feedback, diagnosing retrieval failures that surfaced as plausible but incorrect answers rather than errors

carti, measured | Python, librosa, NumPy

2026

- Built a feature-extraction pipeline over **84 audio signals** spanning four releases, computing spectral centroid, rolloff, and tempo; found a ~580 Hz break in mean spectral centroid at the hypothesized boundary
- Hand-corrected 27 tempo estimates where automated detection failed, then published method and results on Substack and GitHub

LEADERSHIP, ACTIVITIES & HONORS

- **VP of Recruitment**, The Cube LLC, Duke's entrepreneurship living-learning community; run the recruitment cycle and organize the Duke Buildathon
- **Peer Educator**, MATH 122L (Calculus II with Applications), Duke Academic Resource Center
- **Founder**, SelSellsKeebs; built and sold 3,000+ custom keyboards and keycap sets, 20K+ Instagram following
- **Member**, Duke Quantitative Finance and Duke Association for Women in Mathematics
- **First Place**, Jane Street Mystery Puzzle Competition (solo entry), 2026
- **Valedictorian**, Malverne Senior High School; Coca-Cola Scholars Regional Finalist (top 0.25% of 100,000+ applicants); Bausch & Lomb Honorary Science Award

TECHNICAL SKILLS

Programming Languages: Python, C++, Java, JavaScript, SQL

Frameworks & Libraries: React, MapLibre GL, NumPy, pandas, librosa

Cloud, Infrastructure & APIs: AWS (S3, CloudFront, Lambda), Supabase, pgvector, Git, OpenAI API

Interests: Poker, chess, DJing, custom PC and keyboard builds, tennis