Rohan Chhaya

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A determined engineer with interests in software + data engineering, ML/AI, biotechnology, and protein design

EDUCATION

University of Pennsylvania | Philadelphia, PA   Graduation: May 2024
Master of Science: Data Science   GPA: 4.00/4.00
Teaching Assistant for CIS 5200: Machine Learning and CIS 3500: Software Engineering
Relevant Courses: *Statistics, Math Behind ML, Graph Neural Networks, Applied Probability, Algorithms, Big Data, Image Analysis*
Semester at ETH Zurich, Relevant Courses: *Nonconvex Optimization, Machine Learning for Genomics, Computational Fluid Modeling*

Bachelor of Science in Engineering: Bioengineering (Summa Cum Laude)   GPA: 3.93/4.00
Minor: Computer & Information Science, **Concentration:** Biomedical Data Science & Computational Medicine

PROFESSIONAL EXPERIENCE

Profluent | Emeryville, CA (Frontier AI startup scaling programmable gene editing systems)   **November 2025 - Present**
Software Engineer II, Bioinformatics

Talroo | Austin, TX (AI-powered talent recruitment startup, >1 billion queries per month)   **July 2024 - November 2025**
Software Engineer II, Generative AI & Data Engineering
- Implemented query personalization for publishers and authored the Talroo Publisher Spec **(distributed to 300+ companies)**
- Built the backend for First Touch (new initiative for first-time applicants, **increasing CPC bids by 4x**), consisting of a fault-tolerant Spark pipeline (with DLQ, fast/slow streams, etc.) for cookie-based user linking and a Lambda API for search integration

Software Engineer I, Generative AI & Data Engineering
- **Achieved a 20% gain in quality-adjusted revenue** (confirmed via incremental A/B testing) via search algorithm improvements, such as dynamically weighting BM25 and integrating intent- and qualification-based filtering for high-skilled positions
- Built several low-latency Spark pipelines (**50M+ tokens/min**) that enhanced qualification extraction with a tuned BERT model (**+0.42 F1**), embedded jobs and resumes for email personalization, and normalized job descriptions with LLMs for the front-end
- Mentored 3 interns, providing feedback via 1-on-1s and technical guidance on Delta Lake, ETL construction, and LLM chaining

Ginkgo Bioworks | Boston, MA (Synthetic biology platform pioneer) – *Software Engineering Intern*   **June 2023 - August 2023**
- Developed an end-to-end solution for biologists to mark certain DNA sequences as controls, trace them throughout the design and ordering process, and deliver data to analytics teams via new API endpoints (featured on the company blog)
- Achieved **80% accuracy and a 3x speedup** in DNA buildability prediction runtime via LLMs (HyenaDNA)

MongoDB | New York City, NY (Largest NoSQL database provider) – *Software Engineering Intern*   **June 2022 - August 2022**
- Delivered a new async event monitoring endpoint for the Swift driver, addressing user requests and streamlining internal tests

University of Pennsylvania Farah Lab| Philadelphia, PA – *Computational Research Assistant*   **December 2021 - May 2023**
- Architected ML models to quantify socioeconomic impacts on metabolic biomarkers, lead poster presenter at APS 2023

PROJECTS

Epilog: Built a headband with EEG electrodes to detect non-convulsive seizures (group of 5, **provisional patent 18/628,803, video**)
- Implemented a prediction API (via Django) to predict seizure probability from Arduino data using ML **(AUROC = 0.95)**
- Designed a mobile app to connect to the prediction API with a user-friendly interface for low-latency prediction

PennMobile Android: Served as Team Lead (2022-24) for Penn's main app that students use to interact with campus (via Penn Labs)
- Led 6 developers and built features (polls, laundry notifications, dining analytics), **increasing daily active users to >800 (+17%)**

Axon Avengers: Predicted finger flexion angles from time-series ECoG data using signal filtering and ensembled regression models

FIFAnalysis: Analyzed Denmark vs Tunisia 2022 FIFA World Cup match using ML for xG, game phases, and set pieces

SKILLS & AWARDS

Technical
- Languages: Python, Java, JavaScript (TypeScript, React), Scala, SQL (Postgres, SparkSQL, MySQL), PHP, Kotlin, Swift (fast learner)
- Tools: Git, CI/CD, Cloud/Infra (AWS, Azure, Redis, GCP), AI (LLMs, MCPs), API Design (Lambda, Spring, Django, REST), Agile
- Experienced in data engineering (Spark, Delta, Databricks, Pandas, MLFlow, Torch) and physical computing (Arduino, PCBs, etc.)

Interpersonal
- Skilled communicator: trilingual with experience in public speaking, poster presentations, and teaching (math, music, speech)

Awards
- 2026 Austin Marathon Finisher
- Penn Engineering 2024 Technology and Innovation Award Winner (**chosen from 100+ senior design projects by 50 judges**)
- University of Minnesota 2024 National Emerging Medical Valuation Competition Finalist and Top 6 Finisher
- 2022 MongoDB Green Award (Project: comparing energy efficiencies of MongoDB drivers, featured on company blog + podcast)
- Previous: Regeneron ISEF Finalist, Harvard National Extemp Finalist, Eagle Scout