Gautam Mittal

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EDUCATION

UC BERKELEY
B.S. Electrical Engineering & Computer Science (EECS)
Expected May 2022 | Berkeley, CA
GPA: 3.85 / 4.0
Regents' and Chancellor's Scholar
Accel Scholar
Kleiner Perkins Engineering Fellow
Eta Kappa Nu (EECS Honor Society)
Cal Hacks, UC Jazz, Statistics Undergraduate Student Association

SKILLS

LANGUAGES
Python • JavaScript • Swift • Java • C
Go • SQL • Scheme • Ruby • RISC-V
Objective-C

TOOLS
PyTorch • JAX/Flax • TensorFlow
NumPy • Node.js • Flask • Rails • HTML
CSS • React • Max/MSP • AWS • GCP
UNIX • Git • MongoDB • PostgreSQL

LINKS

GitHub: github.com/gmittal
LinkedIn: linkedin.com/in/mittalgautam
Website: gautammittal.com

COURSEWORK

CS61B: Data Structures
CS61C: Computer Architecture
CS70: Discrete Math & Probability
CS170: Algorithms & Intractability
CS161: Computer Security
CS162: Operating Systems
CS164: PL & Compilers (Fall 2021)
CS186: Database Systems
CS188: Artificial Intelligence
CS189: Machine Learning
CS194-26: Computer Vision (Fall 2021)
EECS16A: Linear Algebra & Circuits
EECS16B: Diff. Equations & Control
EECS126: Random Processes
MATH53: Multivariable Calculus
CS195: Social Implications of Computing

EXPERIENCE

TESLA | Machine Learning Intern, Autopilot
May 2021 – August 2021 | Palo Alto, CA

- Working on the Full Self-Driving (FSD) Vision team under Andrej Karpathy

RISELAB, UC BERKELEY | Undergraduate Researcher
September 2019 – Present | Berkeley, CA

- Researching deep reinforcement and unsupervised learning for databases
- Co-implemented system for training a relational query optimizer without imitation learning and experimented with VAEs and feature perturbation techniques to improve learned representations
- Co-authored conference paper (under peer review) on learned query optimization and presented work at RISE Retreat (2020, 2021)

GOOGLE | Research Intern, Google Brain
May 2020 – January 2021 | Mountain View, CA

- Researched deep energy-, score-, and diffusion-based generative models for symbolic music generation under the Magenta team
- Designed two-stage non-autoregressive model for unconditional generation and gradient-based sampling for post-hoc infilling
- Implemented and evaluated Transformer-based models, fast sampling mechanisms, and MusicVAE data pipelines with JAX, Flax, and TensorFlow
- Co-authored conference paper (under peer review)

STRIPE | Software Engineering Intern
May 2019 – August 2019 | San Francisco, CA

- Built an end-to-end data export pipeline for Connect, used daily by Lyft, DoorDash, and others to process millions of financial objects
- Refactored export infrastructure to use a concurrent GraphQL resolver to enable API-consistent data, faster exports, and increased security
- Designed and tested data infrastructure using Ruby, Elasticsearch, & MongoDB; worked on Stripe Dashboard front-end with React

PROJECTS

FEVERBASE | Founding Engineer | feverbase.org
March 2020 – July 2020 | Python, Flask, MongoDB

- An open platform for COVID-related clinical trial data connecting researchers, patients, and the public to relevant information for drug discovery and trial participation; Source code: github.com/feverbase

Additional projects available at github.com/gmittal.

AWARDS

2020 Contrary Talent Fellow (inaugural cohort)
2019 IEEE Eta Kappa Nu Member (top 25% of Berkeley EECS)
2019 Accel Scholar (run by Accel Partners & Berkeley EECS)
2019 Kleiner Perkins Engineering Fellow
2018 Regents' and Chancellor's Scholarship (top 2% of incoming class)
2018 US Marine Corps & Louis Armstrong Jazz Awards
2016 MIT Zero Robotics Challenge International Finalist
2015 Top 10 at MHacks, PennApps (international hackathons)
2015 Apple WWDC Scholarship