

# Tejas Gupta

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## EDUCATION

### Princeton University

Princeton, NJ

Bachelor of Science in Engineering in *Computer Science*

May 2024

- **GPA: 3.98/4.00**
- *Coursework:* Machine Learning, Pattern Recognition, Generative AI, Natural Language Processing, Information Security, Software Engineering, Data Structures & Algorithms (**class TA**), Programming Systems (**A+**), Principles of Blockchains (**A+**), Product Management Bootcamp, Technology Venture Capital & Entrepreneurship, Robotics
- *Minors:* Values and Public Life (Philosophy and Political Theory), South Asian Studies
- *Awards:* **Shapiro Prize** for Academic Excellence (award by faculty nomination for top Princeton undergrads)  
**Novogratz Bridge Year Scholar** '19-'20 (competitive one-year scholarship to work & study in India)  
**Tau Beta Pi** (oldest engineering honor society in U.S.A.; top 3% of engineers)
- Chosen for competitive **Departmental Exchange at ETH Zürich** Spring 2023

### Millburn High School

Millburn, NJ

- *SAT: 1600, ACT: 36, GPA: 4.4/4.0, rank: 4* June 2019
- *Awards:* U.S. Presidential Scholars Program Semifinalist, National Merit Finalist, National AP Scholar

## PROFESSIONAL EXPERIENCE

### Bridgewater Associates

Westport, CT

*Investment Associate Intern*

June 2023 – Aug. 2023

- ⇒ World's largest hedge fund and investment management firm with \$150B+ assets under management
- Learned to analyze macro-economic fundamentals from first principles and translate to trading strategies
- Conducted quantitative research using volatility and options based strategies on Portfolio Analytics team

### Tower Research Capital

New York, NY

*Quantitative Trading Intern*

June 2022 – Aug. 2022

- ⇒ Fully automated high-frequency trading and financial services fund with significant global trading volume
- Analyzed and executed (mock) trading strategies and constructed quantitative forecasting models using machine learning, time series analysis, and a complete transformer-based natural language processing pipeline
- Designed and coded extensible algorithm and dev tool for ranking relative market impact of scheduled economic events on U.S. and international equities and futures

### NITSAN Sustainable Development Lab

Tel Aviv University, Israel

*Research Assistant*

June 2021 – Sept. 2021

- Developed regression models, GIS maps, and water-quality metrics to examine efficacy of alternative irrigation systems in irrigation efficiency and water utilization in over 600,000 rural Indian villages

## SELECTED PROJECTS AND RESEARCH

### Statistical Evaluation of Indian Soil Security for Urban-Rural Systems Science Applications

*Python*

- Worked with **Google Research**; sponsored by Princeton M. S. Chadha Center & Urban Nexus Lab
- Applied geospatial data science and remote sensing to identify anomalies in novel Soil Health Card dataset

### Social Platform for Music Discovery and Analysis

*Swift, Javascript, Firebase, deployed on iOS*

- Developed iOS app to build shareable personalizable music insight profiles using Spotify & OpenAI APIs
- Built novel profile recommendation algorithm based on similarities in users' music profiles

### Robust Knowledge Graph Completion (KGC) with Convolutions and Student Re-Ranking Network

*Python*

- Modified Lovelace et al., 2021's paper on KGC by replacing textual embeddings using Phrase-BERT
- Wrote 9 new loss functions for student re-ranking objective to optimize correct fact choice

## LEADERSHIP EXPERIENCE

### Princeton IgniteSTEM non-profit, President and Director

Jan. 2021 – present

- Manage recruitment, outreach, curriculum development, and sponsorships for EdTech non-profit
- Organize bi-annual professional conference for 100+ K12 teachers and annual student design thinking challenge

### Princeton Club Squash, President and Captain

Jan. 2021 – present

- Coach 5 practices per week for sixty-student team and organize competitive intercollegiate matches