

# Anuj Nagpal

+1-(650)-441-6529 | anujnag@stanford.edu | anujnagpal96@gmail.com

## PRIMARY INTERESTS

Deep Generative Models • Graph Machine Learning • Data Science  
Reinforcement Learning • Natural Language Processing

## WORK EXPERIENCE

**GOLDMAN SACHS** | GLOBAL MARKETS DIVISION, BENGALURU  
Associate Jun 2018 – Jul 2021  
Summer Analyst May 2017 – Jul 2017

- Worked as a **quantitative and algorithmic market making** developer with area of focus in electronic and automated trading of corporate bonds, credit default swaps and money market products.
- Developed and supported applications that stream **algorithmic prices** to electronic trading platforms as well as **automatically quote** a subset of the incoming trade inquiries using live market data, product attributes, and manual trader inputs.
- Built **robust and scalable systems** that can handle the inevitable increased loads while collaborating with a peer group scattered across cross-geographic teams.

## TEACHING EXPERIENCE

**COURSE TUTOR** | IIT KANPUR  
Fundamentals of Programming (ESC101) Jan 2018 – Apr 2018

- Designed exams, quizzes and lab assignments for a **class size of 470 students** and supervised them with a team of teaching assistants, which helped students to assess their learning of the course contents
- Conducted **weekly tutorials** to help students in grasping the concepts by clarifying their doubts, along with **lab sessions** for applying these concepts real-time to build programming solutions.

## KEY PROJECTS

### PROBABILISTIC WORD SENSE EMBEDDINGS

Prof. Piyush Rai | IIT Kanpur | [Report](#)

- Developed a **Gaussian mixture model for probabilistic word vector generation** having reduced number of local word specific parameters by modeling them as a linear combination of few global basis vectors.

### DEEP REINFORCEMENT LEARNING AGAINST PONG AI

Prof. Piyush Rai | IIT Kanpur | [Report](#) | [Video](#)

- Implemented a **double duelling deep Q network** and then a **deep policy gradient network** that was eventually able to beat the Atari Pong emulator provided by OpenAI gym.

### GDP FORECASTING USING TIME SERIES MODELING

Prof. Amit Mitra | IIT Kanpur | [Report](#)

- Modeled Indian GDP data as an **ARIMA process** by using R implementations of Holt Winters Seasonal Smoothing, ADF Test, KPSS Test, Ljung Box Test and AIC/BIC criteria for deciding order.

## EDUCATION

### STANFORD UNIVERSITY

2021-23 | M.S. IN COMPUTATIONAL  
AND MATHEMATICAL ENGINEERING

### IIT KANPUR

2014-18 | B. TECH. IN COMPUTER  
SCIENCE AND ENGINEERING  
• ACADEMIC EXCELLENCE AWARD

## SKILLS

### PROGRAMMING

Python • C/C++ • Java • R • Scala  
JavaScript • SQL • Bash • HTML/CSS

### SOFTWARES / LIBRARIES

TensorFlow • PyTorch • Keras  
scikit-learn • Pandas • Numpy • Git

## COURSEWORK

Deep Generative Models\*  
Machine Learning with Graphs\*  
Natural Language Processing#  
Reinforcement Learning#  
Probabilistic Machine Learning  
Machine Learning Techniques  
Deep Learning  
Applied Stochastic Processes  
Time Series Analysis  
Convex Optimization#  
Probability and Statistics  
Principles of Database Systems  
Design and Analysis of Algorithms  
Computing Laboratory  
Computer Networks

\* - In Progress, # - Upcoming

## POSITIONS HELD

- COORDINATOR JUL 16 - JUL 17  
Association of Computing Activities  
(ACA), IIT Kanpur
- SECRETARY JUL 15 - JUL 16  
Programming Club, IIT Kanpur

## LINKS

LinkedIn: [linkedin.com/in/anujnag/](https://www.linkedin.com/in/anujnag/)  
Homepage: [anujnag.github.io](https://anujnag.github.io)