

Anuj Nagpal

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WORK EXPERIENCE

GOLDMAN SACHS | ANALYST

June 2018 – Current | Securities Division, Bengaluru

- Worked as quantitative and algorithmic market making developer with area of focus in electronic and automated trading of corporate bonds and credit derivatives.
- Developed and supported applications that enabled traders to automatically price credit products based on real time market data, product attributes and manual trader inputs and stream those prices to clients on electronic trading platforms

GOLDMAN SACHS | SUMMER ANALYST

May 2017 – July 2017 | Securities Division, Bengaluru

- Added support for trading fractional-year tenor single name CDS for a major venue in New York and London.
- Implemented automated scenario tests for e-trading of corporate bonds on a major venue in New York with anticipated reduction of manual testing effort before every code release.
- Unification of and making robust FIX protocol message dictionaries used for communication during electronic trade negotiations.

KEY PROJECTS

PROBABILISTIC WORD SENSE EMBEDDINGS

Prof. Piyush Rai | IIT Kanpur

- Worked on probabilistic word vector generation using gaussian mixture model with reduced number of local word specific parameters by using a linear combination of global basis vectors.

DEEP REINFORCEMENT LEARNING AGAINST PONG AI

Prof. Piyush Rai | IIT Kanpur

- Developed a policy gradient network and a double duelling deep Q network that was able to beat computer agent in the Atari game Pong.

IMPROVING SECURITY OF ZOOBAR SERVER

Prof. Sandeep Shukla | IIT Kanpur

- Exploited overflow, format string, DoS vulnerabilities and crafted browser based attacks followed by fixing bugs and implementing principle of least privileges by separating various processes.

JAVA TO X86 ASSEMBLY COMPILER

Prof. Amey Karkare | IIT Kanpur

- Implemented a Java to x86 compiler from scratch using python and ply incorporating advanced features like short circuiting, register allocation optimization and classes

GDP FORECASTING USING TIME SERIES MODELLING

Prof. Amit Mitra | IIT Kanpur

- Modelled an ARIMA process on GDP data using R libraries, Holt Winters Seasonal Smoothing, Augmented Dickey-Fuller Test, KPSS Test, Ljung Box Test and AIC/BIC criteria for deciding prder.

LIVE VIDEO MULTISTREAMING WITH CHAT ROOMS

Prof. Dheeraj Sanghi | IIT Kanpur

- Developed a live-video streaming platform with chat room support built using Flask Python Web Framework, OpenCV Library and Unicorn WSGI HTTP Server for load handling

EDUCATION

IIT KANPUR

2018 | B. TECH. IN COMPUTER SCIENCE AND ENGINEERING

- Cum. CPI: 9.33 / 10.0

B. M. M. SEN. SEC. SCHOOL

2014 | MANDI KILLIANWALI, PUNJAB

- AISSCE Class XII (CBSE): 96.2%
- AISSE Class X (CBSE): 10.0/10.0

SKILLS

PROGRAMMING

Python • C/C++ • Java

JavaScript • PHP • SQL • Bash

R • Haskell • Go • HTML/CSS

SOFTWARES / LIBRARIES

TensorFlow • Numpy • scikit-learn

Keras • Git • \LaTeX • Vim • Matlab

IntelliJ • Ruby on Rails • Node.js

COURSEWORK

MACHINE LEARNING

Probabilistic Machine Learning (A)

Machine Learning Techniques (A)

Applied Stochastic Processes (A)

Time Series Analysis

Micro (A), Macro(A) and Monetary (A*) Economics*

COMPUTER SYSTEMS

Computer Systems Security (A*)

Computing Laboratory I (A) and II (A*)

Computer Networks (A)

Compiler Design (A)

(A* - Exceptional Performance)

POSITIONS HELD

- COURSE TUTOR, FUNDAMENTALS OF PROGRAMMING (ESC101)

Jan 18 - Apr 18 | IIT Kanpur

- COORDINATOR, ASSOCIATION OF COMPUTING ACTIVITIES (ACA)

Jul 16 - Jul 17 | IIT Kanpur

ACHIEVEMENTS

- ACADEMIC EXCELLENCE AWARD 2 times - 2016 and 2018 | IIT Kanpur

- ALL INDIA RANK 190

JEE Advanced 2014 (formerly IIT JEE)

- ALL INDIA RANK 220 | State Rank 4

JEE Main 2014 (formerly AIEEE)