SHUBHAM GUPTA

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EDUCATIONAL QUALIFICATION

Year	Degree	Institution	Score
Present	B.Tech. Chemical Engineering	Indian Institute of Technology Kanpur	7.6 CPI
2017	AISSCE	Nalanda Academy, Kota	85.4%
2015	AISSE	S.R. Public School, Kota	10.0/10.0

SCHOLASTIC ACHIEVEMENTS

- Achieved a percentile of **99.1** all over India in JEE-MAINS, (more than 1.2 million candidates) — 2018
- Attended **VIJYOSHI CAMP**, mentored by Nobel Laureates, conducted by IISc Bangalore — 2016
- Awarded **Kishore Vaigyanik Protsahan Yojana (KVPY)** Fellowship, DST, Government of India — 2015
- Achieved **11th rank** in Indian National Earth Science Olympiad, Geological Society of India, Govt. of India. — 2015
- **National Talent Search Examination** (NTSE) first stage qualified, NCERT, Government of India — 2015
- Attended Training Camp of Indian National Earth Science Olympiad, Geological Society of India, Govt. of India — 2015
- Achieved **100 percent score** with **International Rank 4** in International Olympiad of Science, Silver Zone — 2013

PROJECTS

- **Text Based Analysis of Financial Constraints** *Jul'20- Ongoing*
  Mentor: Prof. Suman Saurabh, Industrial and Management Engineering, IIT Kanpur
  - Learnt about the **Financial Constraints** and methods to analyse financial constraint index for various firms
  - Used NLP techniques like **Tokenisation, Lemmatisation,** processed over **400** machine-readable annual reports of firms
  - Differentiated between **equity, debt, private-placement focused delay** of investment by finding specific words in data
  - Calculated financial constraint index using **Cosine Similarity**, representing the extent of delay investment for a firm
- **Stock Price Prediction using LSTM network (Self Project)** *Jun'20-Jul'20*
  - Optimised an LSTM network to predict stock prices using Convolutional 1D layer, Bidirectional LSTM and Dense Layers
  - Improved the mean absolute error form **0.94** using only LSTM network to **0.66** working of seven years of data
- **RNA Gene Expression Data Analysis using PCA (Self Project)** *Jun'20-July'20*
  - Identified the Adenocarcinoma tumour and removed Neuroendocrine tumour using **PCA(Principal Component Analysis)**
  - Applied **K-Means Clustering algorithm** to analyse the effect of Interferons in Pancreatic Adenocarcinoma tumours
- **Trading Strategies & Backtesting** *Dec'19-Jan'20*
  Mentor: Sachin Angural, Finance Discussion Group, IIT Kanpur
  - Learnt about various strategies like **Momentum** & **Pairs Trading,** various KPIs and Technical Indicators
  - Using historical data, formulated strategies to optimise a portfolio by backtesting using Python
- **Website Development of Chemical Engineering Dept.** *Aug'19-Feb'20*
  Mentor: Prof. Rahul Mangal, Chemical Engineering, IIT Kanpur
  - Revamped existing **Website of Department of Chemical Engineering**, IIT Kanpur using HTML and CSS
  - Designed the Front-End keeping in mind the user interactivity with website and hence improving user experience
- **Destroyer T-360** *Aug'19-Nov'19*
  Mentor: Prof. Mohit Law, Mechanical Engineering, IIT Kanpur
  - Developed a **Ballistic Tank** conceptualised on **Hand-Crack Mechanism** that could change it's azimuth and elevation
  - Constructed the plan on AutoCAD, used 3-D printed products, Arduino coding and basic machining
  - The firing mechanism of the tank was **Voice Controlled** which used IOT component: **HC-05 Bluetooth Module**
- **Market Research & Patent Evaluation** *Dec'18-Jan'19*
  Mentor: Harshit Baranwal, Finance Discussion Group, IIT Kanpur
  - Utilised **Capital Expenditure Calculations** to evaluate the market size for a product or a patent
  - Determined the profitability of a product by **DCF (Discounted Cash Flow)** and **NPV (Net Present Value)** calculations

TECHNICAL SKILLS

Programming/Scripting: C, C++, Python, MATLAB, R, LaTeX.   **Databasing:** MySQL.

Web Development: HTML, CSS, Javascript.   **Utilities & Tools:** Git, AutoCAD, AutoCAD Inventor.

RELEVANT COURSES

Fundamentals of Computing	Chemical engineering Thermodynamics	Fluid Mechanics
Linear Algebra & Differential Equations	Computational Methods in Computing	Thermodynamics

CERTIFIED ONLINE COURSES

Trading Algorithms	Introduction to Machine Learning	Practical Time Series Analysis	Mathematics for ML
Sequence Models	NLP in TensorFlow	Equity Portfolio Management	Bayesian Statistics

POSITIONS OF RESPONSIBILITY

Coordinator, Finance & Analytics Club (2020-21)

Leadership	• Lead a team of **25 members**, managed FB group of **2.1K members** & a **budget of 95K** to promote finance • Conducted projects, discussion talks, seminars and workshops on various fields in finance and analytics
Initiatives	• Organised **month long workshop** on Algo Trading, ML in Finance & Derivative Markets, **600+ participated** • Organised **five, 2-month long summer projects** on various innovative methods and techniques in finance

Department Under Graduate Committee Nominee, Chemical Engineering (2020-21)

Objective	• Advise students about their curriculum and academic opportunities in the Chemical Engineering Department • Monitor the progress of academically weak students and handle any academic problem faced by students
Initiatives	• Organise industrial trips and programming sessions for **150+ students** to benefit them in core opportunities • Offering core projects in a way that is time effective for professors & bridges the gap b/w students and dept

Student Guide, Counselling Service Team (2019-2020)
- Guided and mentored **4 freshman students** in acclimatising to the environment of the institute
- Helped them with their academics by arranging meetings with their mentors and maintaining a good rapport
- Successfully organised Orientation Program for **900+ freshmen** working in a team of **175 student guides**

Badminton Secretary, Games & Sports Council (2019-2020)
- Conducted **two badminton leagues** and **one inter hostel tournaments** to promote badminton in the campus

Senior Web Executive, Udghosh (2019-2020)
- Created and maintained the database using Google Firebase for the official website of Udghosh with 10 people

EXTRA CURRICULARS

- Won a **Silver Medal** at inter hall badminton competition (Inferno), 2019
- Active member of campus badminton team which represents IIT Kanpur at Inter IIT sports meet
- Current **#1** on leaderboard in **Equity Portfolio Management competition** AlphaBeta League conducted by AlphaBeta
- Completed **Hacktober Fest 2019**, created plugin for personal assistant for macOS/LINUX telling user's current location