Raghav Kapoor

Software Analyst at Goldman Sachs | B.E (Hons.) Computer Engineering, NSIT Delhi

📱 +91-9910033452   ✉ raghavkapoor16@hotmail.com   ☏ raghav-kapoor

🌐 raghav1606.github.io   in raghavkapoor16   ⌾ Raghav1606

Education

- **Netaji Subhas Institute of Technology (NSIT), Delhi University**   New Delhi, India
  B.E.(Hons.) - Computer Engineering; CGPA: 9.11/10.0 (Top 10 of 200 students in Dept.)   *[2015-2019]*
  Courses: *Operating Systems, Data Structures, Analysis Of Algorithms, Artificial Intelligence, Compiler Design, Automata and Formal Language, Computer Architecture, Networking, Databases, Microprocessors, Computer Graphics, Expert Systems*

- **Amity International School, Mayur Vihar**   New Delhi, India
  AISSCE Class XII (Computer Science); Grade: 96.2% (Ranked 2nd in a class of 180 students)   *[2013-2015]*
  AISSCE Class X; CGPA: 10.0/10.0

Work Experience

- **Goldman Sachs**   Bengaluru, India
  - **Software Development Analyst**   *[Jun 2019 - Present]*
    - Building large scale ultra-low latency systems in GS Electronic Trading (HFT) platforms team that cater to 1000+ clients.
    - Driven projects with external vendors like Fidelity in the US exchange connectivity space to connect to upcoming darkpools.
    - Enhanced load capacity of (OM2) order management system by 50% and increased revenue by 20% on a daily basis.
    - Developed a tool to effectively distribute short sell locates among clients thereby increasing trade volumes by 35%.
    - Undertook training at New York Office and qualified Chartered Financial Analyst Level 1 to hone functional competencies.
  - **Software Development Intern**   *[May 2018 - Jul 2018]*
    - Interned in the GS Electronic Trading team to create a web based monitoring solution using Python, Flask, Shell.
    - The app curated all host related information from single API and performs health check for hosts to enhance the resiliency.

- **Sandrock e-Securities Pvt. Ltd.**   New Delhi, India
  - **Software Trainee**   *[May 2016 - Jun 2016]*
    - Developed an android mobile application using java, that allows remote monitoring for security threats and risk assessment.
    - This internal visualization tool allowed a intuitive understanding of complex information security issues for end users.

Research Experience

- **Netaji Subhas Institute of Technology, Delhi**
  - **Student Researcher [Natural Language Processing]**   *[Feb 2019 - May 2019]*
    - Advisors: Prof. M.P.S. Bhatia, Prof. Preeti Kaur
    - Optimized MaltParser to create Hindi contextualized embeddings over a corpus of IIT-Bombay Hindi movie reviews.
    - Compared contextualized embeddings of different dimensions with vanilla counterparts like, Twitter Word2Vec, FastText Hindi, GloVe on Hindi sentiment analysis task (Observed nearly 15% improvement in accuracy). [code]

- **MIDAS Lab, IIIT-Delhi**
  - **Research Intern [Natural Language Processing, Social-Media Analysis]**   *[Aug 2018 - Feb 2019]*
    - Advisors: Prof. Rajiv Ratn Shah, Prof. Ponnurangam Kumaraguru, Prof. Roger Zimmermann
    - Developed an LSTM cum transfer learning model for Hinglish offensive text classification over HEOT dataset
    - Researched and trained own word embeddings for code-mixed languages. (Achieved state of the art accuracy: 87%)
    - Worked on a couple of publications and presented the paper at AAAI-19 conference in Hawaii [poster][video][blog]

Publications

- **Transfer Learning for Detecting Hateful Sentiments in Code Switched Language:** K Rajput, **R Kapoor**, P Mathur, P Kumaraguru, RR Shah, Deep Learning-Based Approaches for Sentiment Analysis, Springer [2020]
- **Mind your language: Abuse and offense detection for code-switched languages: R Kapoor**, Y Kumar, K Rajput, RR Shah, P Kumaraguru, R Zimmermann, Association for the Advancement of Artificial Intelligence (AAAI) [2019]
  [Best Student Poster Award]

Skills and Certifications

- **Languages** C/C++, Python, Shell Scripting, Java, Javascript, C#, SQL
- **Technical Skills** Machine Learning, Natural Language Processing, Competitive Programming, Web Dev, Android
- **IT Constructs** Linux, Data Structures, Algorithms, DBMS, Distributed Systems, System Design, Socket Programming
- **Libraries/Frameworks** Keras, Tensorflow, NLTK, Scikit Learn, Flask, Node.js, Unity3D, React, Groovy, Rasa NLU
- **Certifications** Machine Learning, Coding Blocks; Complete Java Certification Course, Udemy; Web Dev Mastery, Kyrion

PROJECTS

- **Dvesh Prahari: Attackers in Disguise (B. Tech Project Thesis)** *[Manuscript in Progress]*
  - Deals with detecting hate speech and sarcasm in political memes and twitter pages in context of code-switched languages
  - Curated and annotated an IPM (Indian Political Memes) dataset and used code-switched embeddings over an CNN-LSTM model that processes image and text separately for state-of-the-art results in this domain
  - **Tech Stack:** Python, NLTK, Keras, Scikit-learn. [preprint][code]

- **PropSafe (Smart India Hackathon'19)**
  - A web application designed to automate the land/real estate transaction system used by land registry offices in India.
  - The app detects property frauds using AI based checks and smart contracts/blockchain for maintaining tamper-free records
  - **Tech Stack:** ML - Python, Scikit-learn, Keras; Blockchain - Truffle, Javascript; Web app - Node.js, HTML [code][ppt]

- **UPCHAAR - Medical Appointment System (Smart India Hackathon'18)**
  - Developed a central portal for patients, doctors and hospitals to manage and provide efficient healthcare by improving appointment scheduling in hospitals with provision to followup, rescheduling and SMS or app notifications.
  - **Tech Stack:** Python, Django, Java, Android, HTML, Bootstrapper [code][ppt]

- **A-VOID (Independent Project)**
  - Developed a novel fun filled arcade game involving the concepts of circles and packing efficiencies with 2 game modes and in app purchases. Previously hosted on the google play store world wide with 4800+ downloads and 4.7 star rating.
  - **Tech Stack:** Unity3D, C# [code][demo]

SCHOLARSHIPS AND GRANTS

- **AAAI-19 Travel Grant** Granted $500 by AAAI foundation to present my paper during AAAI-19 at Hawaii

- **Merit Scholarship for Academic Excellence (NSIT)** Awarded twice for being among the top 5% in COE department

HONORS AND AWARDS

- **Awarded Triple Crown, Escalator Award, Pioneer Gold Award**, Toastmasters International for Public Speaking [2020]
- **Finalist (Top 10)**, GS ML Hackathon'19 (Among 100+ teams) [2019]
- **Winner**, Smart India Hackathon' 19, Govt. of India - For Project PropSafe (Among 6000+ teams) [2019]
- **Best Poster Award**, AAAI-19 (Mind Your Language: Abuse and offense detection for code-switched languages) [2019]
- **Honourable Mention**, ACM ICPC-18 Gwalior-Pune Regionals [2018]
- **Grand Finalist**, Smart India Hackathon'18, Govt. of India - For Project UPCHAAR (Among 5600+ teams) [2018]
- **Qualified for Indian National Astronomy Olympiad**, HBCSE (Among top 300 or 1%ile nationwide) [2014]
- **Proficiency in German language**, Cleared Fit in Deutsch (German proficiency test) levels A1 and A2 [2013]

VOLUNTEERING EXPERIENCE

- **Volunteer at Community Team Works (CTW), Goldman Sachs** *[Aug 2019 - Present]*
  - Prepared educational material for intellectually challenged adults at Diya Foundation to nurture basic employability skills.
  - Provided alms to underprivileged students at Shristi Academy (partner NGO) and helped them solve their routinely problems.

- **Community Helper at Premala Bai Chavan School For The Deaf** *[Jan 2021 - Present]*
  - Assisted students with hearing impairments and their teachers with their educational needs for virtual classes.
  - Participated in food distribution activities for the school students and arranged computer systems for the institute.

POSITION OF RESPONSIBILITY

- **GS Walk the Talk Toastmasters Club**
  Club Mentor | Vice President, Membership *[Jan 2020 - Present]*
  - Handled member concerns, maintained influx of new members into the club and handled administrative tasks of the club.
  - The club won Golden Gavel, Club d'Elite awards under my leadership for completing membership targets.

- **Hackerearth**
  Freelance Problem Setter and Editorialist *[Oct 2018 - Jan 2019]*
  - Problem setter and editorialist for various online competitive programming and recruiting contests.
  - Created new problems for official monthly contest on Hackerearth - Hourstorm 7 which had a participation of ∼1k.

- **Algorithm Society of NSIT (ASN)**
  Senior Board Member and Educator *[Aug 2016 - May 2018]*
  - Instructed freshers and sophomores at weekly SIGs at ASN on data structures and algorithms (Class of nearly 60 students)
  - Worked on core membership team and increased membership count by 100% within an year.