

SHREYA GUPTA

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EDUCATION

Qualification	Passing Year	School/University & Board	Score	Rank
B.Tech-Software Engg.	2016-2020 (expected)	Delhi Technological Univ.	9.2/10 CGPA	Department Rank-3 (out of 98 students)
XII (Sr. Sec.)	2016	DAV Public School, CBSE	95.6%	Batch Rank-6 (out of 410 students)

Featured Coursework: Machine Learning, Deep Learning, Natural Language Processing, Discrete Mathematics, Linear Algebra, Multivariate Calculus, Modeling and Simulation, Object Oriented Software Engineering, Compiler Design

WORK AND RESEARCH EXPERIENCE

- **UCLA Institute of Pure and Applied Mathematics and Google LA** [Jun - Aug'19]
Research Intern and RIPS-NSF Scholar, Mentors: *Dr. Bao Wang, Vardan Akopian & Scott Schneider*
 - Working with IPAM, UCLA and Google, to ensure end-user privacy while making online search datasets useful to advertisers.
 - Identifying patterns in the ways user information is queried.
 - Developing methods to quantify safety and risk in users' privacy during transactions and suggesting mitigation strategies.
- **AI Lab, Delhi Technological University** [May'19 - Present]
Undergraduate Researcher on Speech diarization, Supervisor: *Dr. Rajni Jindal*
 - Identifying who speaks when using **speech models**, language probabilistic models and Recurrent Neural Network (RNNs).
 - Competing with state-of-the-art Google's UIS-RNN as a part of Bachelor thesis.
- **TavLab, Indraprastha Institute of Information Technology, New Delhi** [May'19 - Present]
Research Intern on Antimicrobial Stewardship for novel bacteria, Supervisor: *Dr. Tavpritesh Sethi*
 - Detecting bacteria pathogenicity using **LSTM** and **Attention models**; finding pathogenic subsequence in novel bacteria.
- **Indian Institute of Technology, Delhi** [Jan'19 - Present]
Independent Research Intern on Early Stage Cervical Cancer detection in females, Supervisor: *Dr. Tapan Gandhi*
 - Working on identifying early stage **cervical cancer detection in females**.
 - Developing a **camera integrated iOS application** to find probability of cervical cancer from **user clicked images**.
- **Software Engineering, Delhi Technological University,** [May'18 - Apr'19]
Undergraduate Researcher on Deep Learning in Software Quality Predictive Modeling, Mentor: *Dr. Ruchika Malhotra*
 - Empirical study critically and visually analyses the **use and application of deep learning architectures** in determining Software Quality Prediction Metrics (**SQPM**) like defect prediction, effort estimation, fault localisation etc.
 - Identified shortcomings of the existing research and enlisted future guidelines of use for DL in SQPM.
 - '*Empirical Study of Deep Learning in Software Quality Predictive Modelling*' under Peer-Review.
- **Neuroscience Lab, Indian Institute of Technology, Delhi** [May - Dec'18]
Neuroscience-Infering the process of object recognition from brain signal using MATLAB, Supervisor: *Dr. Tapan Gandhi*
 - Proposed a novel method for face recognition from **MEG signals of human brain**.
 - Reduced the effective time stamps from 100-360 ms to 120-240 ms, decreasing computational complexity by 54%.
 - Found neurons in the brain responsible for visual identification using **Support Vector Machines** with Gaussian Kernel.
 - '*Identification of Neural Correlates of Face Recognition using Machine Learning Approach*' presented at **ISCMM-2019**.

ACADEMIC PROJECTS

- **Bilingual Word Sense Disambiguation (WSD)** [Mar'19 - Present]
 - Performing parallel bilingual WSD on two low resource languages, Hindi and Marathi.
- **Real-Time Epidemic Spread Mapping** (*Smart India Hackathon'19*) [Feb - Mar'19]
 - Created a biomedical **web and android application** for **Thermo Fischer**.
 - Maps **crowdsourced** and **historical time-series data**, visualises in real time; **predicts the spread** of current/recurring **epidemic**.
 - Predicts the forthcoming epidemic using **FastAI** and **PyTorch**; **alerts the dispensaries** if medication falls shorter than the upcoming demand using **Flask API**; alerts the people of a spread and hospitals nearby.
- **Tracking Complaint Status** (*BrainWaves'19*) [Jan-Feb'19]
 - Worked with ~**44,000 complaints** (reason, summary, company response, transaction type etc.) to **classify the complaint status** into one of four categories for **SocGen**, French multinational banking company.
 - Used Google's **BERT-as-a-Service** to encode sentence embeddings of complaints and company response into 768 feature vector.
 - Deployed two layered **BILSTM** to automate tracking.
- **Voice Assistant for LinkedIn** (*Wintathon'19*) [Jan'19]
 - Designed a voice assistant for LinkedIn; enables users to **search** for people and job openings, **navigate** and **maintain** (add/delete/view/edit) **profile** sections using voice command only. Integrating with Amazon Alexa.
 - Model uses Part-of-Speech (**POS**) tagging, **NER** and constituency **tree parsing**, **skip gram model**, **conceptNet** and **coreNLP**.

- **Sentiment Analysis for Movie Review Classification** (*Self undertaken*) [Dec'18]
 - Used Google's **Word2Vec** to classify **movie reviews** obtained from IMDb as **positive or negative** with an **accuracy of 83%**.
 - Created models using **bag-of-words**, **word vectors**, **POS tagging**, and clustering; analysed model performances.
- **Happiness Index Analysis to Facilitate Policy Making** [Sep-Oct'18]
 - Used World Gallop Poll to **rank countries** based on their Happiness Index. Conducted a local poll of 250+ responses and **ranked Delhi** in the world rankings using a **Multivariate Linear Regression** model with an accuracy of **91.28%**.
 - Found socio-economic attributes that influence happiness of the people to assist Delhi Government in policy making.
- **ATM Surveillance in Banks** (*Infosys Digital Makeathon '19*) [Oct'18]
 - Constructed a working prototype which used AI, ML and Deep Learning architectures to perform ATM Surveillance in Banks.
 - Designed **face recognition**, using **FaceNet**, optimised **object classification**, using **CNN**, to identify and report abnormal activities in banks in real-time, reducing manual monitoring and preventing thefts and skimming.

AWARDS AND ACADEMIC ACHIEVEMENTS

- **Google Women Techmaker Scholar 2019**, awarded to students who work for diversity and inclusion in the field of Computer Science.
- **RIPS Scholar 2019, IPAM, UCLA**, one of the 36 selected interns from 1000+ applications (acceptance rate: 3-4%)
- **First Runners Up**, Infosys Digital Makeathon'18 for designing a cost effective solution to provide ATM Surveillance in Banks.
- **Department Rank 1** with a CGPA of 9.83/10.00 in fourth semester. **Department Rank 3** in Software Engineering overall.
- **99.69 Percentile** in JEE Mains based on class 12th board results and JEE Mains score.
- **Athlete of the year** - DAV Public School, for winning accolades in Volleyball, Basketball and Athletics (2016)
- **National Level Volleyball Player** - led the team that ranked 4th at DAV National Games, 2014
- **NTSE Scholarship** for being in top 500 among all schools in India (2012).

TECHNICAL SKILLS

- Programming: C++, C, Python, R
- Frameworks: MATLAB, PyTorch, Tensorflow, Keras, OpenCV,
- Familiar-with: HTML, CSS, PHP, Java
- Matplotlib, Pandas, Sci-Kit, SQLite, Oracle, Eclipse, Flask

POSITIONS OF RESPONSIBILITY

- **Founder and President**, Habiliter Learning Group, College's first all-women machine learning SIG. (Jan'19-Present)
 - Conducted an online session with [Mr. Karan Sanwal](#), Software Engineer, Google, Mountain View, answering FAQs on career in industrial research and pursuing a Masters in Science from an esteemed university abroad.
 - Collaborating and organising peer-reviewed sessions and modules and weekly paper reading sessions.
- **Core Team Member and Evangelist**, Women Who Code Delhi (Aug'18-Present)
 - Lead 'Practically ML'¹, a machine learning workshop series of 5 sessions, teaching ML from practical perspective. Taught 300+ students, undergraduates, researchers and industry professionals, collectively. Held competitions.
 - Collaborated with ZS Associates and gave a long abstract on Big Data to an audience of 70+ attendees.
 - Featured in WWCode Global's bi-weekly newsletter [Code Review](#) and WWCode Delhi's [Applaud Her](#) section.
- **Core Team Member**, Delhi Women in Machine Learning and Data Science (WiMLDS) (Aug'18-Present)
 - Organised MLCC powered by Google. Mentored a group of 7 students in building their first ML project from scratch.²
 - Organised 'Everything ML' and delivered a talk on 'NeuroML'³, interdisciplinary work between neuroscience and machine learning.
- **Captain**, Girls Volleyball Team, DTU. Helped build a team of 12+ girls for the first time in DTU (Aug'17-Present)
- **Creative Head**, Aahvaan, DTU, largest Sports Fest of North India. Monitored a budget of Rs. 20,000; led a team of 40+ students. (Feb'18)
- **Actor, Writer and Core-Team member**: Pratibimb, Theatre Society of DTU (Aug'16-Dec'17)

¹ <https://github.com/WomenWhoCodeDelhi/PracticallyML>

² <https://github.com/ShreyaGupta08/Breast-Cancer-Detection-using-Machine-Learning>

³ <https://github.com/ShreyaGupta08/WiMLDS-Talk-NeuroML>