Jannat Chehal

+1 (669) 588-5520 • jannatchehal09@gmail.com • linkedin.com/in/jannat-chehal • github.com/jannat226 • devjannat.com

Education

- **Virginia Commonwealth University**, Richmond, Virginia
  MS in Computer Science, GPA: 3.9 — *Aug 2024 – Present*
- **CHRIST University**, Bangalore, India
  Master of Computer Applications, GPA: 3.7 — *Jul 2023 – May 2024*
- **University of Delhi**, New Delhi, India
  Bachelor of Science in Applied Physical Science, GPA: 3.6 — *Jul 2019 – May 2022*

Experience

Natural Language Processing Lab, VCU, Richmond, Virginia — *Jan 2025 – Present*
Research Assistant
- Preprocessed and engineered features from biomedical text (e.g., BC5CDR dataset with 1,500+ PubMed abstracts and 50,000+ annotated entities) for deep learning-based relation extraction.
- Developed a hybrid CNN + Transformer (SciBERT) model in PyTorch Lightning to identify chemical-disease interactions, improving F1-score by 7% over baseline.
- Improved model accuracy and robustness to support automated extraction of biomedical relationships, aiding research in neurogastroenterology.

Engineering Career Services, Virginia Commonwealth University
Graduate Student Software Engineer — *June 2025 – July 2025*
- Built a student-alumni mentoring interface using Google Sheets and Apps Script, at the request of Career Services.
- Implemented mentor profile viewing, single-session booking restriction, and automated email delivery of mentor details.
- Currently used by 100+ students, streamlining the mentorship process and enhancing student-alumni engagement.

Virginia Commonwealth University, Richmond, Virginia
Teaching Assistant — *Sep 2024 – Dec 2024*
- Led weekly programming labs focused on C fundamentals, algorithmic problem solving, and code debugging for 30+ undergraduate students.
- Provided individualized mentorship to 20+ students, assisting with lab submissions and clarifying core programming concepts.

Raceme Tenders LLP, Delhi, India
Software Engineer Intern — *Mar 2022*
- Updated the legacy code written in Php and mysql to its newest version .
- Migrated legacy website to AWS Cloud for improved scalability and uptime as part of a three-person engineering team.
- Optimized backend performance and reduced page load latency through infrastructure refactoring.

Software Engineer Intern — *Sep 2021*
- Developed an automated web crawler to extract to download 500+ tender documents daily from dynamic web pages (e.g. karnataka eprocurement site), significantly reducing manual labor and improving data acquisition speed.
- Utilized web scrapping using Python and Selenium to extract structured information from unstructured sources efficiently.

Projects

Relation Extraction on BC5CDR Dataset |Python, PyTorch, SciBERT, CNN, WandB — **Source**
- Built an end-to-end pipeline to extract chemical–disease relations from BC5CDR (PubMed) 1,500+ abstracts for biomedical NLP.
- Included model training, evaluation, and experiment tracking using Weights & Biases (WandB).
- Contributed to improving entity-level relation prediction to support large-scale biomedical information retrieval, aiding research in neurogastroenterology and automated drug-disease mapping.

Tennis Video Analysis System | Python, YOLOv8, OpenCV, Streamlit, PyTorch — **Source**
- Developed an interactive application to analyze tennis match videos by detecting players, ball trajectories, and court zones in real time using YOLOv8 trained on custom tennis datasets.
- Implemented real-time tracking with OpenCV and visualized performance insights using Streamlit dashboards.
- Enabled data-driven feedback for coaches and players, streamlining post-match review and performance analysis.

RideShare – Real-Time Carpooling App | React Native, Firebase, Node.js, OpenStreetMap API — **Source**
- Built a fullstack carpooling app with real-time ride booking, location tracking, and Firebase-backed user management.
- Integrated OpenStreetMap API and Leaflet for accurate route mapping and optimized ride navigation.
- Encouraged sustainable transportation by facilitating shared rides and reducing solo trips on campus.

Technical Skills

Programming Languages: Python, SQL, Java, JavaScript, Kotlin, C++, C, R
Frameworks & Libraries: PyTorch, Numpy, Pandas, Tensorflow, HuggingFace, React, Express.js, Next.js,NodeJS
Tools & Platforms: Git, GitHub, Weights & Biases, Firebase, Prisma, MySQL, MongoDB, AWS
Core Competencies: MySQL, MongoDB, Firebase,Deep Learning and Neural Network, Machine Learning, Data Statistics using R, Knowledge Discovery, Data Science, Advanced Algorithms, Advanced Databases,Statistics, Linear Algebra , Python