CHETANYA GUPTA

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PROFESSIONAL EXPERIENCE

WESTERN DIGITAL, BANGALORE **Sep 2024 – June 2025**
Data Science Intern

- Designed and deployed a **Generative AI production system** to automate insights extraction from 500K+ production records, handling 1,500+ user queries with low latency.
- Elevated query accuracy from **37% → 85%** by experimenting with prompting strategies and optimizing model selection (Claude, Titan, Cohere, LLaMA).
- Replaced knowledge base with **SQL Agent + metadata filtering**, cutting embedding costs significantly and increasing retrieval precision by **40%**.
- Engineered **RAG pipelines (LangChain + PostgreSQL vector DBs)** for context-aware SQL generation and automated structured data ingestion (hourly updates).
- Deployed workflows on **AWS Bedrock + Kubernetes**, enabling scalable and cost-efficient GenAI solutions.

NATIONAL INFORMATICS CENTRE, DELHI **Dec 2022 -Jan 2023**
Web Developer Intern

- Delivered **3+ production-ready modules** for the ePanchayat Mission Mode Project, enhancing accessibility for 250K+ Gram Panchayat records.
- Implemented state-wise theme prioritization for the Vibrant Gram Sabha app, **streamlining decision-making** across 29 states/UTs.
- Introduced entity-wise tracking in the Sankalp Taken module, improving transparency of resolution monitoring by **30%**.
- Collaborated on both **frontend and backend (Java, Spring, Hibernate, PostgreSQL, Bootstrap, JavaScript, jQuery)** to deliver scalable and user-friendly solutions.

TECHNICAL PROJECTS

GENDER GAP ANALYSIS REPORT — DATA ANALYTICS

- Analyzed **100K+ global labor and wage records across 20+ countries** to uncover key drivers of gender inequality.
- Achieved **92% accuracy** in identifying wage-gap patterns using **Python (Pandas, NumPy, Matplotlib, Seaborn)**.
- Created **dashboards and NLP-based flowcharts** to highlight disparities in wages, management roles, and labor distribution with actionable recommendations.

EYE DISEASE CLASSIFICATION — DEEP LEARNING (CNN)

- Constructed a **CNN model** for retinal disease detection, attaining **92% accuracy** on test data.
- Enhanced dataset quality by preprocessing and augmenting **10K+ labeled images** with **OpenCV**, reducing overfitting by **15%**.

TECHNICAL EXPERTISE

- **Programming & Analytics:** Python, C++, SQL, JavaScript, Pandas, NumPy, Power BI
- **Web & Backend Development:** HTML, CSS, Bootstrap, FastAPI, Flask
- **Cloud & Databases:** AWS (S3, Lambda, Bedrock), Azure, Kubernetes, PostgreSQL, MySQL
- **AI/ML & Generative AI:** LangChain, OpenAI API, Anthropic Claude, Pinecone, FAISS, RAG, Scikit-learn, TensorFlow, Keras, Prompt Engineering

CERTIFICATIONS

- **Data Science at Scale**, Coursera (University of Washington); **Data Science using Python**, Internshala
- **Database Learner**, Oracle Academy
- **Introduction to C++**, NPTEL

EDUCATION

Bachelor of Engineering in Computer Science with Big Data Analytics, Chandigarh University 2021–2025
CGPA: 8.2/10.0

Intermediate (CBSE), Bal Bharati Public School, Delhi — **92.0%** 2021
Matriculation (CBSE), Bal Bharati Public School, Delhi — **96.0%** 2019