

Chirdeep Singh Reen

AI Software Engineer | Cloud & Infrastructure | M.Sc. Computer Science

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TECHNICAL SKILLS

Programming Languages and Frameworks

- Python
- JavaScript/ Typescript
- React
- SQL
- C/C++
- Rest APIs, Fast APIs
- NumPy, Pandas, Scikit Learn
- PySpark, PyTorch, TensorFlow
- LangChain/ LangGraph
- Hugging Face

Data Engineering, Cloud and Infrastructure as Code

- AWS Services (S3, Lambda, Glue, Athena, SageMaker, Bedrock)
- Microsoft Azure (Azure ML, Azure SQL, Data Factory)
- Spark/ PySpark
- SQL/NoSQL stores
- Object Storage
- Data Warehouse/ Lake/ Lakehouse
- Batch/Streaming Ingestion
- ETL/ELT

AI, Machine Learning

- RAG
- Prompt Engineering
- Embeddings
- Vector Databases
- Data Mining
- LLM frameworks
- Predictive modelling
- Natural Language Processing
- Recommendation systems
- Computer Vision

Orchestration and DevOps

- Git/GitHub Actions
- Azure DevOps pipelines
- Terraform
- CI/CD
- Docker
- Airflow

SUMMARY

AI Software Engineer with expertise in programming, data engineering, DevOps, cloud technologies, and AI/ML. Experienced in building scalable data pipelines, evaluation workflows, and production-grade AI and ML systems across Azure and AWS using Python, SQL, PySpark, CI/CD. Graduated with a M.Sc. in Computer Science (Distinction). Passionate about creating impactful software that empowers users and driven to contribute to innovative technology, that adds value to society. Actively seeking opportunities to grow and deliver value in software, data and AI roles.

EDUCATION

Jan 2023 - March 2024	Masters of Science, Computer Science University of Strathclyde Glasgow, United Kingdom Grade: Distinction
Aug 2016 - Aug 2020	Bachelor of Technology, ISC Engineering Netaji Subhas University of Technology, New Delhi, India Delhi, India Grade: First Division Honours

WORK EXPERIENCE

October 2025 - Present	AI Software Engineer VGL Group Limited • Built end-to-end ML + data pipelines using Python, PySpark, Azure ML, and Azure SQL, improving forecasting performance from 65% to 90% through better feature engineering and model parameter optimisation. • Built an internal LLM knowledge assistant using LangGraph and RAG (embeddings + vector search) to retrieve context from SQL and documentation, with grounded summaries and cited source links. • Built a large-scale machine learning prediction model using 1.5B+ operational records from 20+ locations, enabling next-day stock discrepancy predictions and delivering 96% accuracy in stockout detection. • Implemented Azure DevOps CI/CD workflows for ML pipelines (automated testing, model retraining, and artifact versioning), improving deployment reliability and auditability. • Created internal utilities/scripts to speed up running experiments, comparing results, and tracking outputs across iterations.
July 2021 - Dec 2022	Business Analytics Associate CoBot Systems Pvt Ltd. • Built and maintained scalable ETL pipelines (100M+ records) ensuring high-quality datasets for analytics and decision-making. • Automated 40+ reporting + data workflows using Python, SQL, AWS, reducing manual effort by 70% and improving turnaround times. • Conducted data + API validation (Postman + SQL), supported schema updates, and improved performance through query optimisation. • Diagnosed and resolved 80+ production issues using root-cause analysis, automated checks, and Git-based version control. • Collaborated with cross-functional teams and stakeholders to translate business requirements into shippable solutions.

- Automated Testing

CERTIFICATIONS

- **Hugging Face: AI Agents Fundamentals**
- **AWS Certified Cloud Practitioner (CLF-C02)**
- **DeepLearning.AI: Introduction to Data Engineering**
- **DeepLearning.AI: Source Systems, Data Ingestion, and Pipelines**
- **Meta: React Basics**
- **IBM: Python Basics for Data Science**

PERSONAL

COMPETENCIES

Strong teamwork, communication, and leadership abilities developed through group projects and teams throughout my academic and professional experience. I demonstrate resilience, adaptability, strong problem solving and strategic thinking with a curious mindset for continuous learning.

VOLUNTEERING

Strathclyde Sports Union

StrathActive Leader

- Led and organised 20+ recreational team sports events involving a total of 750+ students, promoting physical and mental well-being.
- Contributed to a 50% increase in participation by fostering peer engagement and building a welcoming and inclusive environment.

HOBBIES & INTERESTS

I'm passionate about team sports, and play football to maintain fitness. I also enjoy playing guitar in my free time, learning songs or creating some of my own.

PROJECTS

February 2026

GitHub Code Review Agent with Multi-Agent Autofix

- Built a GitHub App for automated PR reviews using a two-pass pipeline (static analysis + LLM semantic review via Ollama/OpenAI), posting inline comments and severity-ranked summaries directly on pull requests.
- Designed a multi-agent autofix system (ReviewAgent, RefactorAgent, VerificationAgent) generating deterministic patches and auto-committing via the GitHub Contents API
- Implemented FastAPI webhook with HMAC-SHA256, GitHub App JWT auth, rate-limit backoff, Docker Compose deployment, and full JSON/JSONL/CSV audit trail.

January 2026

AI Product Intelligence and Review Insights Platform

- Designed and built a React-based AI web app that analyzes aggregated electronics product reviews to surface insights, side-by-side comparisons, trend visualisations, and rich visual analytics via an interactive dashboard with search.
- Integrated a chatbot powered by a RAG pipeline over a review knowledge base and implemented an end-to-end full-stack architecture (React frontend + FastAPI backend), packaged and deployed as a cloud-hosted application.

April 2025

UK Energy Mix Analytics & Automation Pipeline

- Built an end-to-end data engineering and analytics pipeline to track and analyse UK's hourly energy mix.
- Automated batch data collection and transformation using Apache Airflow from NESO API.
- Processed datasets with Python to extract key trends in fuel usage, renewable vs fossil contributions, and seasonal demand patterns, enabling real-time insights.

May 2024

Image Similarity Based Recommendation System

M.Sc. Thesis, University of Strathclyde

- Development and implementation of an end-to-end machine learning pipeline in Python for a movie recommendation system, integrating the TMDB API for data retrieval and preprocessing.
- Enhancement of feature extraction using transfer learning by fine-tuning ResNet50, improving model performance.
- Reduction of data dimensionality through auto-encoders to optimize computational efficiency.
- Application of cosine similarity to cluster visually similar movie posters effectively.

August 2024

Mental Health monitoring application for Social Media Platforms

Course Project, University of Strathclyde

- Developed a Mental Health Monitoring Application for social media platforms, utilizing advanced natural language processing techniques.
- Processed and cleaned over 10,000 labeled tweets to create high-quality datasets supporting mental health intervention research.
- Demonstrated the effectiveness of transformer-based architectures in mental health detection by achieving a classification accuracy of 91.62%, surpassing traditional models such as CNNs and LSTMs.