Srishti Dutta

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EDUCATION

Heritage Institute of Technology, Kolkata **September 2023 – June 2027**

Bachelor of Technology in Computer Science and Engineering, Specialization in Data Science *CGPA: 9.02/10*

SKILLS

Languages: Python, CSS, TypeScript, JavaScript, R, SQL, Rust, Solidity, Go, C, Elixir
Technologies & Frameworks : Full-Stack Development, Computer Vision, Data Analysis, Machine Learning, Cloud-Native Systems, Phoenix, FastAPI, Flask, Kubernetes, Docker, Git, CI/CD, OpenAI API, IPFS, MediaPipe, OpenCV, Microsoft Azure APIs
Soft Skills: Agile Collaboration, Analytical Thinking, Problem Solving, Communication, Leadership, Project Management

EXPERIENCE

Thiruvaikavur Software Solutions **June 2025 – Present**

Software Development Intern *Tamil Nadu, India*

- Built a real-time pose estimation and biomechanical analysis system using Python, OpenCV, and MediaPipe, achieving 92% pose accuracy with sub-33ms latency; implemented rule-based + ML-assisted exercise evaluation and integrated real-time audio feedback for users.
- Designed and deployed a FastAPI inference backend containerized with Docker and orchestrated via Kubernetes; translated client requirements into modular, scalable architectures through agile collaboration, reducing post-release issues by 19% and accelerating feature adoption by 30%.

PROJECTS

PolyCode | *Rust, gRPC, LSP, Protobuf, React* **February 2026**

- Engineered the core Intermediate Representation (IR) module in Rust, defining a language-agnostic semantic graph to unify Python and Java codebases by modeling functions, dependencies, and control flow; enabled consistent cross-language analysis while reducing language-specific complexity.
- Implemented IR ingestion and normalization pipeline using Protobuf and gRPC, transforming LSP-derived AST events into a queryable graph structure powering analyses such as dependency tracking, unused code detection, and change impact evaluation with near real-time updates.

GreenStamp | *HTML, CSS, Python, FastAPI, OpenAI API, IPFS, EduChain* **May 2025**

- Built a responsive HTML/CSS frontend integrated with a Python + FastAPI + LLM backend, enabling ESG report uploads and processing 100+ reports with 85% accuracy in greenwashing detection.
- Engineered a verifiable audit pipeline using IPFS + EduChain smart contracts, delivering tamper-proof ESG assessments with transparent result visualization.

CryptPredictR | *R, Flask, Facebook Prophet, ARIMA, Binance API* **February 2025**

- Implemented a comparative forecasting study evaluating Prophet vs ARIMA for Bitcoin price prediction, establishing evaluation framework measuring RMSE, MAPE, and inference latency; Prophet achieved 18% lower RMSE and 15% lower MAPE, demonstrating the value of systematic benchmarking methodology in model selection.
- Deployed Flask API with real-time Binance API integration supporting 500+ daily price point forecasts, enabling on-demand trend analysis and dynamic predictions; implemented interactive visualizations and structured data export for faster decision-making, validating the importance of real-time data pipelines for financial forecasting applications.

Kubernetes CronJob Controller | *Go, Kubernetes, Docker, Kubebuilder Framework* **June 2024**

- Led a team of 3 to refactor the Kubernetes CronJob controller with Kubebuilder in Go, cutting technical debt and improving maintainability, which reduced build failures by 25%.
- Integrated external APIs and CRDs with robust reconciliation logic, **ensuring 99% uptime** in automated scaling and resource management across test clusters.

ACHIEVEMENTS

- **Women Engineers Program offered by TalentSprint supported by Google:** Selected among top 0.6% and offered full scholarship for the program, along with additional cash scholarship.
- **Organiser of Google Developer Groups on Campus, HITK:** Led the community to 3,600+ members, achieving a 52% increase in engagement during my term. Managed and organised the Google Solution Challenge Regional Bootcamp that had 600+ attendees from across India.
- **Alignment Mapping Program by AI Safety Sweden:** Selected among 15 people globally for a 10 week virtual program where we map out problems in AI Safety and propose feasible solutions for them.
- Selected among the top **1% to attend EAGxIndia 2024 and 2025** with full travel and accommodation support.