Suborno Deb Bappon

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Education

University of Saskatchewan **Sep. 2023 - Jan. 2026**
Master of Science in Computer Science - Grade: 89.5% *Saskatoon, Canada*

- Relevant Coursework: Software Maintenance & Evolution, Advanced Deep Learning, Human-Centric Software Renovation, Empirical Software Engineering
- Thesis: Enhancing Knowledge Quality of Crowd-Sourced Developer Q&A Platforms through AI-Driven Software Solutions
- Advisors: Dr. Chanchal K. Roy, Dr. Kevin Schneider

Chittagong University of Engineering & Technology **Feb. 2017 - Sep. 2022**
Bachelor of Science in Computer Science & Engineering - CGPA: 3.76/4.00 ***(Merit: 3rd among 128)*** *Chattogram, Bangladesh*

- Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Artificial Intelligence, Machine Learning, Database Management Systems

Skills

Programming Languages: Python, SQL, C++, C, HTML, CSS
Generative AI & Machine Learning: OpenAI Agents SDK, CrewAI, FastMCP, LangChain, PyTorch, TensorFlow, scikit-learn
Frameworks & Databases: FastAPI, Flask, Django, PostgreSQL, MySQL, SQLite
Tools & Platforms: Git, GitHub, GitLab, AWS, Azure, VS Code, Cursor, JupyterLab, Linux, Windows, macOS

Work Experience

Software Developer - AI **Feb. 2026 - Present**
Siemens *Saskatoon, Canada*

- Designing and developing Generative AI and Agentic AI solutions for Siemens' electronic design automation systems.

Graduate Research Assistant — Software Research Lab **Sep. 2023 - Dec. 2025**
University of Saskatchewan *Saskatoon, Canada*

- Developed LLM-powered tools using REST APIs, enhancing code comment quality by 30% and achieving 84.5% developer adoption for *Stack Overflow* answer refinement.
- Built a RAG-powered browser plugin leveraging multimodal LLMs for real-time technical debt detection and classification on *Stack Overflow*, achieving 90.7% accuracy.
- Reduced software prototyping time by 60% and documentation workload by 80% via multi-agent AI systems for automated software design and documentation.

Graduate Teaching Assistant — Computer Science **Sep. 2023 - Apr. 2025**
University of Saskatchewan *Saskatoon, Canada*

- Guided 30+ students through data-driven programming projects, improving project completion rates by 20% through hands-on mentorship and code review sessions.
- Designed and implemented structured grading rubrics that identified key learning gaps, contributing to a 15% improvement in average final exam performance.
- Mentored students on software documentation, version control (Git), and code quality standards, resulting in a ≈15% increase in industry-ready project submissions.

Lecturer — Computer Science & Engineering **Feb. 2023 - Jul. 2023**
Eastern University *Dhaka, Bangladesh*

- Delivered lectures and labs on Python, databases, AI, and machine learning, integrating real-world projects that boosted student lab performance by 22%.
- Mentored undergraduates in software development best practices, improving project completion rates by 30%.
- Modernized course content to align 80% of curriculum with industry topics like data analytics, machine learning and software engineering, enhancing internship readiness.

Projects

Neora: Multi-Agent System for Rapid Software Prototyping – *Python, CrewAI, OpenAI/Gemini API, Gradio, Docker*

- Developed an autonomous multi-agent system that converts plain-text requirements into Python modules and UI prototypes, streamlining the MVP development process.
- Engineered modular YAML pipelines enabling adaptive role-specific reasoning across LLMs such as GPT-5 and Gemini 2.5 Flash.

Repolish: Automated README File Generator – *Python, CrewAI, OpenAI/Gemini API, Gradio, CSS*

- Built an AI-powered tool to parse GitHub repositories and auto-generate professional README files, optimizing documentation process.
- Integrated Gradio-based LLM interface and automated PR workflows, reducing release cycles from hours to minutes.

DEBug.me: Personal Agentic AI Assistant – *Python, RAG, OpenAI Embeddings, Gemini API, Chroma, Gradio*

- Built a RAG-powered AI assistant using Chroma vector search and multi-API integration for accurate, context-grounded responses.
- Deployed a Gradio-based web app with real-time chat, conversation memory, and NTFY-integrated user notifications.

Farmona: Smart Crop Prediction & Agronomic Analysis – *Python, Scikit-learn, Pandas, NumPy, Streamlit*

- Built an ML pipeline with feature engineering and GridSearchCV optimization, achieving 99% accuracy in crop prediction.
- Deployed an interactive Streamlit app for real-time agronomic insights with reproducible deployment artifacts.

Selected Publications

1. **S. D. Bappon**, S. Mondal, and B. Roy. "AUTOGENICS: Context-Aware Inline Comment Generation Using LLMs." In *Proc. IEEE SCAM*, pp. 24–35, 2024.
2. S. Mondal, **S. D. Bappon**, and C. K. Roy. "Enhancing ChatGPT User Interaction through Consolidated Prompts for Issue Resolution." In *Proc. IEEE/ACM MSR*, pp. 222–226, 2024.

Certifications

ML with Python (IBM), Neural Networks & Deep Learning (DeepLearning.AI), NLP with TensorFlow (DeepLearning.AI), Problem Solving (Intermediate) (HackerRank)

Honors & Awards

Best Research Award, CMPT 885: Human-Centric Software Renovation, University of Saskatchewan *(Spring 2024)*
75th Anniversary Recruitment Scholarship, CGPS, University of Saskatchewan *(2023 - 2025)*
Dean's Award, Faculty of Electrical & Computer Engineering, Chittagong University of Engineering & Technology *(Sep. 2022)*

Extracurricular Activities

Vice President Internal, Computer Science Graduate Council, University of Saskatchewan *(Sep. 2024 – Oct. 2025)*
Mentor, Eastern University Computing Club *(May 2023 – Jul. 2023)*

References

Available upon request.