

Om Prajapati

[Email](#) | [LinkedIn](#) | [Website](#)

EDUCATION

Northeastern University

Boston, MA

B.S. Computer Science at Khoury College of Computer Sciences

Sep. 2022 – May. 2026

- **GPA:** 3.7
- **Relevant Coursework:** Programming in C++, Object Oriented Design(Java), Algorithms & Data, AI, Computer Systems, Computer Arch, Mathematics of Data Models, Cybersecurity, Fundamentals of CS II(Java), Discrete Structures

TECHNICAL SKILLS

Languages & Frameworks: Java, C#, Python, JavaScript, React.js, Next.js, Express.js, p5.js, Chakra, CSS

Developer Tools & Platforms: SQL, JUnit/NUnit, Linux, Git, Jira, Bitbucket, Apache, Visual Studio, IntelliJ, Helix ALM

Concepts & Techniques: Algo & DS, OOP, REST APIs, TCP/UDP/IP, Agile/Scrum, Sockets, Medical Devices Processes

EXPERIENCE

Undergraduate Research Assistant

Sep. 2025 – Present

Northeastern University: Neuromotor Systems Laboratory

Boston, MA

- Robotic Physical Therapy and Social Psychology Research
- Engineered robust serial communication drivers to resolve hardware reset race conditions (TTY ACM0/1 flipping), ensuring persistent connectivity for robotic actuators using dynamic port detection algorithms.
- Optimized legacy Motion Capture codebases to improve data throughput and integrated customized control algorithms for precise robotic manipulation during human-subject trials.
- Facilitated neuromotor data collection by configuring IR-optical tracking rigs and managing participant preparation with electrostatic marker sets, ensuring high-fidelity kinematic recording.

Software Engineer, Co-op + Part-Time

Jan. 2025 – Present

OnPoint Surgical – Early Stage AR Surgery Startup

Concord, MA

- Developed and launched an AR 3D guideline rod feature using Unity/C# that increased surgical screw placement accuracy by 2mm and reduced misplacement by 15%, alongside streamlining complex VBT and AVT tethering procedures in pediatrics
- Built a C-arm visualization product with CEO to guide optimal C-arm positioning using AR overlays, reducing fluoroscopy attempts and radiation exposure, while improving targeting of the anatomical volume of interest; PATENT PENDING.
- Designed and implemented a novel IR-IMU hybrid tracking system for the headset, enabling full 6DOF tracking with the accuracy of IR camera, significantly improving user movement from previous IR only system; PATENT PENDING.
- Solo-spearheaded the complete design and development of a critical Field Service Application using C#/WPF, implementing three core modules for complete system setup, significantly streamlining field operations and setup time
- Led the refactoring and enhancement for the TCP communication layer and workflow processes using C# and latency reduction algorithms, resulting in a reduction in processing times and AR headset responsiveness.
- Participated in cadaver labs and collaborated with cross-functional teams in a fast-paced, early-stage startup environment (30 employees, Series C funded with \$XXM in funding and a \$XXXM valuation).

Software Engineer, Co-op

Jan. 2024 – Aug. 2024

Insulet

Acton, MA

- Engineered and implemented a byte stream conversion tool using C#/.NET for Insulet's insulin pod testing software's compatibility with a legacy parsing tool, enabling ease of use in manufacturing processes and failure investigations.
- Assisted the development of a Bluetooth Low Energy (BLE) Hardware Abstraction Layer (HAL) Fixture for the Omnipod 5 Insulin Pod, by documenting commands within the HAL fixture.
- Refactored C# codebase for JSON serialization compatibility of commands and responses, alongside authoring unit and integration tests for new features and tools using NUnit to enhance software stability
- Led a co-op panel for new interns, providing guidance on professional development, offering advice on being a proactive and initiative-taking co-op, demonstrating leadership qualities.
- Received extension offer to contribute to the development of new projects.

PROJECTS

SolidAudit AI - Blockchain Smart Contract Analyzer | Python, FastAPI, Next.js, AI/LLMs, Solidity

Present

- Developed a full-stack AI security platform to audit/analyze Solidity smart contracts, leveraging LLMs (Gemini 2.0/GPT 4.0) to identify critical vulnerabilities and generate actionable, one-click code fixes.
- Engineered a high-performance, concurrent Python backend (asyncio) to run multiple AI and SCA analyses in parallel, drastically reducing security audit times for complex, multi-contract projects.
- This project is the first step MVP toward a bigger venture I am pursuing: creating a full-scale AI-powered IDE for Web3 Smart Contract Blockchain developers that offers a fully supported development environment for secure development.

Open Source Contributor, Gaffer (GCHQ) | Java, Apache Accumulo, Graph Databases, Git

July 2023

- Spearheaded the resolution of critical bugs within Gaffer's MiniAccumuloStore implementation, significantly enhancing system robustness for the large-scale graph database system.
- Diagnosed and engineered a rigorously tested solution to manage null value returns in the query process, preventing potential system crashes and ensuring seamless data operations.
- Gained deep expertise in enterprise-level Java development by navigating a massive open-source codebase and working directly with Apache Accumulo for distributed graph storage.