# 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

**Software Engineer, Co-op**                                                                                Jan. 2025 – Aug. 2025
*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, alongisde 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.

**A* Algorithm Visualizer** | *JavaScript, p5.js, Algorithms, Graph Traversal, BFS*                          December 2022
- Developed a dynamic and interactive visualization of the A* pathfinding algorithm using JavaScript and p5.js to clearly demonstrate complex graph traversal on a grid-based canvas.
- Implemented heuristic-guided search to find the optimal route, showcasing a significant performance improvement over standard Dijkstra's algorithm in finding the shortest path.
- Engineered a step-by-step visual feedback system, allowing users to observe the algorithm's decision-making process in real-time as it explores nodes and recalculates paths.