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 innovative AR 3D guideline rod feature using Unity/C# that increased surgical screw placement accuracy by an average of 2mm and reduced misplacement rates by 15% or 0.5mm, alongside streamlining complex VBT and AVT scoliosis tethering procedures in pediatrics
- Presented the 3D rod guidance feature to leading surgeons, including Dr. James Kang, Chairman of Orthopaedic Surgery at Brigham and Women's Hospital (BWH), receiving commendations for achieving straighter screw and spinal alignment.
- Solo-spearheaded the complete design and development of a critical Field Service Application using C#/WPF, implementing three core modules: surgical instrument management and calibration, implant management with batch processing capabilities, and user profile management for surgeon-specific configurations, significantly streamlining field operations andvsetup 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.