William (Liam) Snow IV

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EDUCATION

Worcester Polytechnic Institute   Worcester, MA
BS in Electrical & Computer Engineering
MS in Computer Science   *Aug 2022 — May 2026*

SKILLS

- **Languages**: Rust 🦀, Golang, C, Java, C#, SystemVerilog, TypeScript, JavaScript, WIT
- **Systems**: io_uring, Tokio, shared memory, no_std, multi-threading, async/await
- **OS**: Linux (Arch, Debian, Talos), Illumos (Helios), Unix
- **Protocols**: REST, MQTT, WebSockets, Protocol Buffers (Protobuf), SPI, I2C, UART
- **Infrastructure**: AWS, Docker, Kubernetes, SQL, NoSQL, Git, CI/CD
- **Profiling**: perf, flamegraph, samply, tracing
- **Other**: WASM, Altium Designer, Fusion 360

PROJECTS

opensleep (120★) (liamsnow.com/projects/opensleep)   Nov 2024 — Present
- Developed open source firmware for the Eight Sleep Pod 3 in Rust
- Reverse-engineered two custom USART protocols, reimplemented using custom Tokio codec
- Adds Home Assistant integration (via MQTT), custom temperature profiles, remote configuration, presence detection, and privacy

igloo (liamsnow.com/projects/igloo)   Jan 2025 — Present
- Building open-source smart home platform in **Rust** as Home Assistant competitor
- Introduced a new device model based on ECS (entity-component-system), massively simplifying the core system, providing more flexibility, backwards compatibility, and all with strict typing
- Implemented query engine achieving **>1 million queries/sec** throughput with 4μs average latency. Internally queries execute in an average of **200ns**.
- Created a visual node-based programming language for automations in WASM. Uses pure web-sys and wasm-bindgen (no framework) and supports over 10,000 nodes.

WORK EXPERIENCE

Security Intern   Jun 2025 — Aug 2025
Cyera, Inc.   *Remote*
- Developed a security investigation summarizer Slack bot in Golang
  ‣ Saves >100 hours a year of manual work by security engineers
  ‣ Collects data from Slack and other sources and builds a report using AWS Bedrock in ~1 minute
- Made VM automation which automatically finds new CVEs across multiple security tools (Snyk, Upwind, etc.) and sends results over Slack
- Developed security news article downloader which automatically scrapes readable content from web pages and formats them into a NextJS article reader
- Made dashboard which displays security team's contributions to sales. Uses Atlassian Jira and Salesforce APIs in Golang

Software Intern   Jun 2023 — Aug 2024
Phreesia, Inc.   *Remote*
- Worked on a team to develop a complete rewrite of the Integrations software using .NET Core & Websockets
- Developed Atlassian Confluence RAG chatbot to help users find answers and cite sources
  ‣ Used Confluence API, OpenAI embeddings, ChromaDB, and LangChain

Software Intern   Jun 2019 — Oct 2020
Naval Postgraduate School   *Monterey, CA*
- Worked under Professor Ray Gamache for programming and assembling robots

- Programmed LIDAR, ultrasonic, radar, AHRS, and GPS sensors in LabVIEW