

VASIL VASSILEV

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EDUCATION

University of Utah

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Bachelor of Science in Software Development • GPA: 3.8/4.0

Relevant Coursework: Database Systems, Computer Security, Web Development, Data Structures & Algorithms, Programming Languages

TECHNICAL SKILLS

Languages: Python, Java, C#, C++, SQL, Rust, JavaScript, HTML/CSS

Frameworks & Libraries: FastAPI, React.js (familiar), Django, PyQt6, .NET

Databases: MySQL, TimescaleDB

Tools & Platforms: Git, Docker, AWS (Lambda, EC2, S3), Linux/Unix, GitLab CI/CD, Grafana, n8n, Wireshark

AI & Automation: Retell AI API, Twilio API, Claude Code, Codex CLI, Amp, Gemini API

Practices: OOP, REST APIs, Agile/Scrum, CI/CD, Test-Driven Development, Database Design (schema, normalization, ACID), Fuzz-testing

PROFESSIONAL EXPERIENCE

Software Engineering Capstone (Industry-Sponsored) | L3Harris Technologies

2025 - 2026

- Extended an open-source network-testing platform (**Rust, Python**) for **military satellite communications** with a five-engineer capstone team, adding multi-chassis coordination on top of the **TRex traffic generator** across geographically dispersed networks.
- Owned **GPS time-synchronization** validation and the scripting API for engineer automation, plus real-time dashboards on **TimescaleDB** and **Grafana**, extending the time-series schema to handle multi-chassis data cleanly.
- Contributed to configurable **in-band and out-of-band telemetry** with sub-millisecond GPS-synced latency measurement and **automatic failover** for unstable satellite links, working in **Agile** sprints with structured code review.

Founder | AI Voice Receptionist Agency (Self-Employed)

2025 - Present

- Built and deployed **AI phone-receptionist** systems for dental and legal practices using the **Retell AI API** and **Twilio**, handling 24/7 call answering, lead qualification, appointment booking, and call routing.
- Built **guardrails for LLM failure modes**, including **confidence-based escalation**, **human-handoff** on low-confidence or out-of-scope calls, and **fallback flows**, so calls degrade gracefully instead of guessing.
- Designed the supporting automation in **n8n**, connecting voice-system webhooks to **CRM** platforms for automated follow-up and lead routing.

Founder & Lead Technician | Mobile Knife Sharpening (Self-Employed)

2020 - 2022

- Founded and grew a service business to profitability across a multi-city territory; built a React.js booking platform that drove a **30% increase in online bookings** and a **50% improvement in operational efficiency**.

PROJECTS & DEVELOPMENT EXPERIENCE

Custom Text Editor | Python, PyQt6, MVC, TDD

2026

- Built a **cross-platform text editor from scratch** with a **custom tokenizer-based syntax-highlighting engine** for six languages, file-tree navigation with auto-refresh, and a memory-optimized undo/redo system.
- Gated AI-assisted development** with a **600+ test suite (pytest)**, catching regressions and keeping the build stable across a three-week cycle.

Open Source Vulnerability Research | C++, AFL++, AddressSanitizer, GDB

2024 - 2025

- Co-discovered **five memory-safety bugs** (buffer overflows and memory corruption) in the StormLib C++ library using **AFL++** and **AddressSanitizer** with OGHarn-generated fuzzing harnesses; triaged crashes in **GDB** to find root causes, reported upstream and resolved.

Full-Stack Database Application | C#, .NET, MySQL

2024 - 2025

- Designed a **normalized MySQL schema** with **entity-relationship modeling** for a multi-role learning-management system (students, professors, teaching assistants, departments), enforcing data integrity with **ACID-compliant transactions**.
- Built the **C#.NET** backend with **LINQ** for type-safe queries and **RESTful CRUD endpoints**, applying **role-based access control** and indexing for performant multi-table operations.

Multiplayer Networked Game | C#, TCP/IP, Multithreading

2023

- Built a **TCP networking library** and game server from scratch with no external dependencies, handling concurrent clients with **multithreading** and **async I/O** for real-time state synchronization and collision detection.

LEADERSHIP & ACHIEVEMENTS

- 5x World Cup Rock Climbing Competitor** | Competed internationally at the elite level across multiple disciplines
- Head Coach**, University of Utah Climbing Team (2023) | Led the team to a **#1 national ranking**
- 3x National Champion** (1:8 Scale RC Racing)
- 3rd Place**, Michigan Invention Convention | Arduino alarm clock designed for the deaf community
- U.S. Citizen** | **Bilingual**: native fluency in English and Bulgarian