

# Randall Krouth

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## Professional Summary

Senior-status Computer Science student and full-stack developer with strong experience in .NET, cross-platform application development, web development, cloud services, machine learning, cybersecurity, GPU accelerated computing, and secure software engineering. Skilled in scalable architectures, RESTful API Development, CI/CD pipelines, ML model design, and programming high-performance systems. Strong foundation in parallel computing, memory optimizations, DevSecOps, and penetration testing. Experienced in freelance engineering and manufacturing/technical environments.

## Education

### SUNY Brockport – Brockport, NY

B.S. Computer Science (Major) | Cybersecurity (Minor)

## Technical Skills (Condensed for ATS)

- **Languages:** .NET, C#, C++, C, Java, Python, JavaScript, TypeScript, SQL, Swift, HTML/CSS, XAML, YAML, XML, JSON
- **Frameworks/Tools:** NGINX, Syncfusion, Qt, CUDA, OpenCL, Apache Arrow, Keycloak, Auth0, Jenkins, Docker, Kubernetes, FastAPI, Django, Flask, Express.js, MIL.NET, PyTorch, TensorFlow, Kestrel, React, Angular, Node.js, JUCE, Unity, Unreal Engine, NoSQL, MongoDB, Kali Linux, Kafka, gRPC, Websockets, NATS, QUIC, Tableau, Power BI, Plotly, OpenShift, JWT's, LDAP, PostgreSQL
- **Cloud Service Providers:** Microsoft Azure, Amazon Web Services, Google Cloud Platform
- **Software:** Visual Studio, Xcode, pgAdmin, Figma, Adobe Suite, Blender
- **Strengths:** Secure coding practices, parallel processing, asynchronous programming, memory and cache optimizations, prompt engineering, user interface development, and hypervisor virtual machine usage including VMware, Virtual Box, and various cloud instances.

## Professional Experience

### Freelance & Independent Software Engineering (2021 – Present)

- Developed full-stack applications using ASP.NET Core Web API, Docker, and cloud services.
- Built and deployed hundreds of machine learning models.
- Developed REST APIs, front-end systems, back-end systems, and CI/CD pipelines.
- Created responsive web, desktop, and mobile applications.
- Designed scalable architectures across ML, API, and game systems.

## **Programming & Development Experience**

- Syncfusion Application and Web Development (.NET MAUI, React)
- Qt Desktop Applications (C++)
- Website Development (Front-End, Back-End, UX/UI, SEO)
- Game Development (Unity & Unreal Engine)
- Machine Learning & AI (Python, ML.NET)
- Audio Synthesis & DSP (JUCE)

## **Certifications**

- IBM: Full Stack Software Development, Back-End Development, AI Engineering, IT Fundamentals for Cybersecurity, DevOps & Software Engineering, Security Analyst
- Google: UX Design, Advanced Data Analytics, Cloud Fundamentals: Core Infrastructure
- Security & Cloud: LearnKartS Certified Ethical Hacking, TryHackMe DevSecOps, TryHackMe Security Engineer, LearnKartS Certified Solutions Architect, Whizlabs Azure Identity Governance and Monitoring Solutions, UC Davis Secure Coding Practices
- Languages: C#, SQL, C++, Java, Python, HTML, CSS, JavaScript, Angular, and Swift 4

## **Training & Additional Competencies**

- Agile development & scrum
- Database Administration: PostgreSQL, NoSQL, MySQL, Db2, MongoDB
- Blender modeling, animation, and rigging
- Predictive analytics & hyperparameter tuning
- Application optimizations, performance/load testing, diagnostics, and security hardening
- OS hardening & penetration testing
- Unit testing, and integration testing