# Alexander T. Karapetkov

Email: *alexander.karapetkov@gmail.com* | LinkedIn: *https://www.linkedin.com/in/alex-karapetkov*
Github: *https://github.com/Alex-Karapetkov* | Portfolio: *https://alex-karapetkov.github.io/*
Mobile: (571) 242 - 9525 | Sterling, Virginia, 20166

## Professional Summary

Computer Science graduate with hands-on experience in full-stack development, application design, and low-code platform engineering. Adept at building responsive web and mobile applications, writing clean and maintainable code, and collaborating in agile development teams. Skilled in Python, Java, JavaScript, Power Platform, and UI/UX tools like Figma and Unity. Passionate about creating secure, scalable, and user-friendly solutions that bridge code and creativity.

## Skills

- **Programming Languages:** Python, Java, JavaScript, HTML5, CSS3, C, C++, Ruby, Haskell, Rust, C#, TypeScript, SQL
- **Web Development:** React, REST APIs, DOM manipulation, responsive design, Bootstrap
- **Software Engineering & Practices:** Object-Oriented Programming (OOP), Version Control (Git/GitHub), Agile/Scrum, Unit Testing, Debugging, SDLC
- **Tools & Platforms:** Visual Studio, VS Code, GitHub, Figma, Postman, Microsoft Power Platform (Power Apps, Power Automate, Power BI), Azure, Unity
- **Databases:** SQL, Dataverse, Excel/CSV-based sources
- **Scripting & Automation:** PowerShell, Bash, Power FX

## Education

**B.S. in Computer Science** — ***James Madison University, 2024***

## Technical Certifications

| | |
|---|---|
| TCM Security SOC 101 (Practical SOC Analyst Training) | Completed June 2025 |
| Microsoft Power Platform Fundamentals (PL-900) | Certified June 2025 |
| CompTIA SecurityX/CASP+™ CE | Certified March 2025 |
| CompTIA Security+™ CE | Certified December 2024 |

## Projects

**DietaryCompanion** *Figma, UX Design* ..... December 2023

- Designed a dietary-restriction-friendly food app using Figma, focusing on usability, filtering logic, and user flows.
- Led design research, wireframing, and interaction prototyping.

**Climate Change VR App** *Unity, C#* ..... November 2023
- ➔ Built an immersive educational VR experience in Unity to simulate real-world climate change effects.
- ➔ Focused on interaction logic and environmental scripting in C#.

**Parking Management System** *Power Apps, Power Automate, Power BI* ..... May 2024
- ➔ Developed a multi-app Power Platform solution for managing school parking requests and inspections.
- ➔ Built a model-driven admin app, canvas inspection app, approval flow, and analytics dashboard.
- ➔ Integrated Dataverse and SharePoint to create a scalable, real-world business process automation.

**GridKid Spreadsheet Engine** *Ruby* ..... December 2023
- ➔ Created a lightweight spreadsheet engine with a custom formula parser and support for cell dependencies.
- ➔ Utilized Ruby to simulate basic spreadsheet functionality and error handling using a domain-specific language (DSL).

**TSP Algorithm Explorer** *Python* ..... May 2024
- ➔ Implemented heuristic algorithms (2-Opt and MST) for solving NP-hard optimization problems efficiently.
- ➔ Applied algorithmic optimization techniques and visualized results using matplotlib.
- ➔ Presented code walkthroughs to peers to demonstrate problem-solving and code clarity.

**Unix Command Line Shell** *C* ..... December 2023
- ➔ Built a simplified Unix-style command line shell in C with support for foreground/background processes, piping, and redirection.
- ➔ Handled system calls (fork, exec, wait, dup2, etc.) and implemented custom signal handling and error reporting.
- ➔ Strengthened low-level programming skills and understanding of OS-level process control.

**RISC-V ALU** *Verilog* ..... April 2024
- ➔ Designed a modular Arithmetic Logic Unit supporting arithmetic, bitwise, and shift operations.
- ➔ Simulated control logic and overflow detection in Vivado using a hardware description language.

---

## Work Experience

**Help Desk Technician** at JMU ..... April 2023 - May 2024
- ➔ Resolved technical issues in Windows, Mac, and Linux environments.
- ➔ Managed tickets using ServiceNow with an emphasis on documentation and response time.
- ➔ Automated common tasks using Bash and PowerShell scripts.
- ➔ Supported user identity and access using Active Directory.

**Site Manager** at JMU Recreation ..... August 2022 - May 2024
- ➔ Served as first point of contact for policy enforcement and incident resolution during intramural sports.
- ➔ Ensured safety, compliance, and communication across a team of officials and participants.
- ➔ Managed shift handoffs, staff oversight, and issue escalation to senior leadership.