Giovanni Lupo

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About Me

I am a versatile and detail-oriented software engineer with a strong foundation in programming, data-driven solutions, and technical problem-solving. My experience spans full product lifecycles, collaboration across technical and non-technical teams, and the development of scalable solutions for complex challenges. I thrive in dynamic environments, quickly adapt to new tools, and bring an ownership mindset to every project I undertake. I have strong communication skills and excel at explaining products.

Education

Drexel University, Philadelphia, PA
Bachelor of Science in Computer Engineering, Minor in Product Design
Graduation: December 2024

LanguBridge Study Abroad Program, Tokyo, Japan
Japanese Language Skills (Conversational)
Summer 2017

Work Experience

LR Paris, Full Stack Engineer
March 2025-Current

- Designs and implements technical solutions that integrate e-commerce platforms with marketing automation, building custom Shopify and HubSpot workflows to streamline sales and lead generation.
- Also applies my AI and product design skills to prototype and test innovative corporate gifting concepts, supporting data-driven decisions and bespoke brand experiences.

ArentFox Schiff, Project Consultant
January 2025-March 2025

- **Tesla:** Provided technical insights and AI expertise to assist in legal proceedings concerning Tesla's Optimus robot. Conducted research and analysis on AI systems, automation, and robotic design implications.
- **Bytedance:** Advised AFS on Bytedance AI model optimization, data security considerations, and algorithm efficiency of TikTok's AI-driven content moderation and recommendation systems.

Pennsylvania Fabric Discovery Center, Technology Manufacturing Assistant
September 2022 - April 2023

- Developed a prototype testing device and software to automate fail rate and edge case testing, reducing time from hours to minutes.
- Contributed to R&D projects with a focus on advanced technology and fabric prototypes for military and civilian applications.
- Documented testing processes and results to support technical documentation.

The Glimpse Group, AR/VR Developer Intern
September 2021 - April 2022

- Worked on prototype VR hardware and SaaS B2B meeting software used by companies and universities.
- Created warehouse training solutions and contributed to research on emerging technologies.
- Provided technical guidance and created user documentation to enhance onboarding and client success.

- Assisted customers with software integration and troubleshooting, ensuring seamless adoption of tools.

Marine Electric Systems, Mechanical Engineer Intern
September 2020 - April 2021
- Redesigned components for US Navy ships to enhance efficiency and usability.
- Recreated parts from obsolete contractors and constructed portable light towers for offshore Naval bases.
- Troubleshot and debugged hardware issues, optimizing performance and reliability.

Drexel University Westphal College, Product Design Teacher's Assistant
August 2021 - August 2024
- Served as the main programmer for a design-focused introductory electronics class where students merged electronics with design.
- Wrote software and code for student projects, assisting in debugging and implementation challenges.
- Taught introductory Python and C programming and guided students on 3D printing, 3D scanning, and laser cutting techniques.
- Supported students in documenting and troubleshooting their projects to achieve optimal functionality.

Drexel University Westphal College, Product Design Lab Assistant
August 2021 - August 2023
- Assisted students in designing and fabricating models in the Product Design Lab.
- Provided support for coding Arduino and other microelectronic projects.
- Collaborated with students to troubleshoot and optimize their prototypes, ensuring high-quality results.

Office of Naval Research, Rapid Prototyping Intern
Summer 2017, Summer 2018
- Designed a low-cost fire rescue drone and a 3D-printed Naval Forward Operating Base.
- Researched early prototype ceramics for heat-resistant applications.
- Assisted in troubleshooting and optimizing prototyping processes to enhance performance.

Patents

U.S. Patent Application No. 18/883,487: Wearable Devices for Health, Well-Being, and Predictive Monitoring Using Artificial Intelligence and Machine Learning.

U.S. Patent Application No. 18/883,504: Health Monitoring Using Smart Garments and Machine Learning.

Skills

3D CAD: AutoCAD, Fusion 360, Solidworks, SketchUp, Rhino (Basic)
Programming: Python, JavaScript, C++, C, C#, HTML, CSS
Development: API Integration, Web Development, AI/ML Research, Rapid Prototyping, Debugging
Documentation: User Guides, Technical Documentation, Code Examples
Other: Cross-functional Team Collaboration, Troubleshooting, Teaching, Customer Onboarding

Projects

Senior Design Hydroponic Vertical AS/RS Farm
August 2023 - June 2024
I worked with a group on a prototype automated vertical hydroponic farm which allowed farmers to easily access higher shelves by using an automated shelf elevator to grab the shelf and lower it to a working space. This design drastically reduced injuries and allowed for a finer-tuned, higher-yielding,

more compact farm. I developed all electronics and software required for full operation of the shelf, including the design of the elevator system with a focus on safety.

DSLR Camera Development (Personal Project)
October 2020 - December 2020
Images Link
I developed a DSLR camera prototype (In Fusion 360, SolidWorks) that used a Raspberry Pi and an interchangeable lens mount. The goal was to build a camera from the ground up, including writing all the software for the system and fabricating all the hardware. I was responsible for every component except for the lens and other off-the-shelf parts.

4 Lens Stereoscopic Camera (Personal Project)
April 2020 - August 2020
Images Link
I created a digital stereoscopic camera (In Fusion 360) using four security cameras to capture 'wobblegrams.' I modified the software, built an enclosure to hold the lenses, and wrote software for simultaneous photo capture and GIF creation. This was a personal COVID project made with home materials.

In-Car Spotify Display (Personal Project)
January 2021 - March 2021
Images Link
I designed a Spotify heads-up display (In SolidWorks) for my Tesla Model 3 using the Spotify API and an intuitive, gesture-based interaction system. Later, I upgraded the system to a Bluetooth-based setup that now serves as part of my home HiFi system.