Ivan Vashchenko

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Education

Bachelor of Science in **Computer Science and Mechanical Engineering** | Principia College | May 2027
Bachelor of Science in **Mechanical Engineering** | University of North Dakota | May 2027
GPA: 3.5
Thermodynamics | Fluid Mechanics | Mechanics of Materials | Design of Machinery | Manufacturing Processes
Finite Element Analysis | Computational Fluid Dynamics | Machine Component Design | Material Science

Experience

Mechanical Engineering Intern | WTI Services Pure Air | Clearwater, FL| Summer 2024

- **Automated office software and estimation tools,** consolidating 3 separate programs into a single application, improving workflow efficiency by **45%.** Eliminated manual data transfers and folder navigation, making the estimation process **3 times faster.**
- Conducted **15+ on-site assessments**, including **mechanical drawings**, fan selection, ductwork design, and pressure calculations, leveraging AutoCAD.
- Earned **promotion** to **fully remote position after a 3-month internship.**

Engineering Automation Intern | WTI Services Pure Air | Remote| September 2024 – May 2025

- Managed projects **independently** during the academic year with minimal oversight.
- **Fully automated and optimized** the proposal and report generation process, reducing turnaround time by **40%**.

Mechanical/Software Engineering Intern | WTI Services Pure Air | Clearwater, FL| Summer 2025

- Led development of a **3D modeling automation system** for the engineering design team.
- Integrated **photogrammetry pipelines, Three.js visualization, and parametric modeling** to reconstruct large air-handling units into interactive, explodable models.
- Delivered tools enabling engineers to rapidly compare existing vs. restored conditions, improving design precision and client communication.

Mechanical Engineering Intern | WTI Services Pure Air | Remote| September 2025 – Present

- Expanding **3D and BIM automation tools** for engineering design, focusing on integration into **CAD/Revit workflows.**
- Coordinating with engineering leadership to scale software tools into broader project delivery.

Projects

QuickScope Estimation Tool – Full-Stack Internship Project

- Built automation platform with C#, VBA, Salesforce, and Google Maps API to handle **multi-department project estimation.** Automated **metadata handling** and reporting features with a user-friendly interface.

3D AHU APP – Full-Stack Internship Project

- Designed a web-based interactive app using photogrammetry, parametric modeling, and Three.js.

Voice Cloner AI – Hackathon Project

- Built a **database-free voice cloning tool** using **Librosa**, **YourTTS**, and a **Streamlit front-end**.

BDX Robotics Project – Applied Computational Modeling Club

- Led a student team to design and prototype a robotics system integrating **mechanical design with embedded programming.**
- Focus on real-world deployment: automation, mobility, and hardware-software synergy.

Computational Chemistry Simulation – Academic Research Project

- Modeled **mechanical properties** of novel materials using computational chemistry approaches.
- Explored parametric relationships between **atomic structure and macroscopic mechanical strength**.

Technical Skills

CAD: AutoCAD | Revit | SolidWorks | ANSYS | 3DF Zephyr
Programming: Java | JavaScript (Three.js) | C# | Python | MATLAB | VBA
Modeling: FEA | CFD | Parametric Modeling | Photogrammetry | Blender | Rhino

Leadership

Founder and President | ACMC | 2025 – Present
House President | Principia College | 2024 – Present
President | Christian Science Organization | 2025 – Present
The National Society of Leadership and Success (NSLS) | 2025