

# DEVANSH RAJ MISHRA

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## EDUCATION

### Union College - BS in Mechanical Engineering (ABET)

**Selected coursework:** Engineering Statistics, Thermodynamics, Computer Science, Data Visualization, Systems Design, Engineering Economics, Computer Science I & II

**Senior Thesis:** Retrofitted HVAC systems at Karp Hall to reduce operational costs and improve energy efficiency

## SKILLS

**CAFM & Visualization Tools:** Power BI, Tableau, Excel, SQL, Python

**CAD & Modeling:** AutoCAD, Revit, SolidWorks, MATLAB

**Data & Workflow Tools:** Python, Node.js, JavaScript, Figma

**Language:** English (Fluent), Hindi (Fluent), Urdu (Fluent), Nepali (Native)

## PROFESSIONAL EXPERIENCE

### WSP | KW Mission Critical HVAC Systems Engineer

Milwaukee, WI | June 2024- Present

- Utilized Autodesk's Revit platform to design and optimize air distribution and hydronic systems
- Conducted comprehensive HVAC load calculations and schedule equipment for optimal performance and longevity
- Evaluated and recommended energy-efficient HVAC systems to minimize environmental impact and reduce costs
- Led documentation and risk assessments for mission-critical mechanical systems to enhance uptime and resilience
- Developed Python automation scripts to process CFD outputs and improve QA workflows

### WSP | KW Mission Critical HVAC Systems Intern

Troy, NY | June 2023- January 2024

### AOKA Engineering | Engineering Intern

Martinez, CA | June 2022- September 2022

- Conducted compliance reviews of building designs to ensure adherence to building codes and regulations.
- Facilitated updates and documentation for AutoCAD-based building systems in collaboration with design leads
- Collaborated with the engineering team to identify and develop solutions for unique design challenges
- Worked with the mechanical plan review team on Revit to ensure accuracy and completeness of construction
- Facilitated client meetings and provided progress updates on projects

### Union College Office of Residential Life | Residential Assistant

Schenectady, NY | August 2021- June 2024

## RESEARCH EXPERIENCE

### NSF Fellow | Biomechanical Modeling

Schenectady, NY | November 2022- June 2024

- Created 3D anatomical CAD models using SolidWorks and FEA simulations in Abaqus for material stress analysis
- Developed custom scripts to run torsion models, aligning geometry with biological motion studies

### Architectural Research Fellow | Universidad de Córdoba

Córdoba, Spain | November 2023- Jan 2024

- Studied passive HVAC systems and spatial planning within historical architecture for sustainability integration
- Mapped architectural geometry and daylighting patterns to inform environmental design retrofits

## ACADEMIC / PERSONAL PROJECTS

### Halftime (Personal Project)

Remote | June 2023- Present

- Designed and developing a Swift UI app with Firebase backend, enabling online user onboarding, profiles, etc.
- Built real-time comment threads and image upload features tied to community-tagged posts
- Created Power BI dashboards to analyze engagement, post distribution, and user growth trends
- Integrated clean user interface with Figma and implemented data-driven design adjustments

### Halftime (Personal Project)

Remote | May 2024- Present

- Developed a logic-based matching engine using MBTI data and Firebase sync workflows
- Built interactive dashboards and automated onboarding pipelines with Type form, Google Sheets, and Power BI
- Implemented Twilio-based SMS interaction with GPT-powered conversation starter logic
- Focused on clean system architecture and workflow transparency

**P500 Stocks Analysis:** Analyzed SP500 data in Tableau, creating visual dashboards (bar charts, scatter plots) to assess market capitalization, revenue, and sector performance, applying advanced formatting and aggregation techniques.

**SP500 Stocks Analysis 2:** Enhanced Tableau skills by creating hierarchies, groups, calculated fields, and filters to analyze dimensions like profitability and market cap.

**MLB Salaries 1988-2019:** Focused on handling imperfect data, created highlight tables, applied table calculations (percent change, rank, running total), and used condition filters to highlight top earners.

**Automotive Stocks:** Created interactive Tableau dashboards to analyze stock returns and financial data, utilizing unions, dynamic filters, and multi-source integration for automakers.

**AutoCAD Space Planning (Academic + Work):** Maintained and updated AutoCAD polylines to reflect space layouts during HVAC upgrade design and analyzed workspace performance using custom dashboards in Tableau and Power BI