

Ben Salak

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in benjamin-salak

Education

Rose-Hulman Institute of Technology, magna cum laude, GPA: 3.72 / 4.0 **Terre Haute, IN**
B.S. Mechanical Engineering, Dynamics and Controls Concentration *August 2018 – November 2022*

Experience

Raytheon Missiles and Defense **Tucson, AZ**
Guidance, Navigation, and Control Engineer *April 2023 – Present*

Altec **St. Joseph, MO**
Controls Developer Intern *June 2022 – August 2022*

- Built firmware in MATLAB Simulink to implement 8 next gen aerial unit control features and validated firmware with software and hardware in-the-loop testing using CanKing and CANape
- Developed technical demonstrator using MATLAB Simulink and SOLIDWORKS for a proprietary Altec CAN-to-fiber optic device to showcase 4 new sensing features and replicate unit conditions for testing
- Designed 3-input tester using SOLIDWORKS for use on production floor

Rose-Hulman Institute of Technology **Terre Haute, IN**
Research Assistant *September 2019 – December 2021*

- Codeveloped and presented to faculty a low-cost (under \$300), open-source liquid chromatography flow meter in SOLIDWORKS by using parts from low-cost scales, and 3D printed and laser cut parts
- Developed and fabricated a force-amplifying linkage for the flow meter that increased output force by 10x

Daifuku Wynright **Bolingbrook, IL**
Controls Engineering Intern *June 2021 – August 2021*

- Designed modular controls mounting system in AutoCAD to decrease 20 brackets to 7 modular brackets
- Collaborated with 6 controls engineers on commissioning a 1.6 million square foot distribution center

Collins Aerospace **Rockford, IL**
Engine Systems Intern *March 2020 – August 2020*

- Reprogrammed Excel-based design tools with MATLAB software, improving analysis speed by 12x
- Generated Excel compliance matrices for standard work and restructured workflow, enabling an average time reduction of 20% for completing compliance matrices, while increasing clarity
- Analyzed technical drawings for part pedigree research and performed

Additional

Skills: 3D dynamics, orbital mechanics, state space and PID control, bond graph, Kalman filtering, Monte Carlo analysis, high performance grid computing

Programs: MATLAB, Simulink, Python, Java, C++, SOLIDWORKS, FreeFlyer, Arduino IDE

Languages: Fluent in French, elementary German

Awards: Competitive Excellence Award (Collins Aerospace), National French Contest gold medalist

Certifications: FE/EIT Exam, OSHA 10hr Construction Safety and Health

Community Involvement: Habitat for Humanity, Tucson Amateur Astronomy Association