Alek Broman

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EXPERIENCE

F-16 Aerospace Propulsion Technician
Air National Guard, 148th Fighter Wing   **Aug 2016 – Present, Duluth, Minnesota**
• Revised erroneous schematics by drawing on the expertise of top experts in the unit and forming technical conclusions for remediation.
• Effectively streamlined a laser etching workflow of the aerospace propulsion activities to create an efficiency that reduced maintenance time.
• Overhauled personnel in-processing pipelines by discovering and eliminating redundancies, which accelerated unit personnel qualification.

EDUCATION

Bachelor of Science, Computer Science, Dean's List
Minor in Computer Engineering and Mathematics
University of Minnesota Duluth • 2021

Associate of Applied Science, Aviation Maintenance Technology
Community College of the Air Force • 2021

U.S. Air Force Program, Aerospace Propulsion Technical Training
Sheppard Air Force Base • 2017

U.S. Air Force Program, Basic Military Training
Lackland Air Force Base • 2017

SKILLS

C++	**Java**	**JavaScript**	**React**	**HTML**	**CSS**
Unreal Engine	**Fusion 360**	**Cura**	**G-code**	**Git**	**Agile**

AWARDS

Saturn Systems Computer Science Scholarship
Saturn Systems Software Engineering • 2021
"For demonstrating strong academic performance, high personal character and, above all, a passion for Computer Science."

Honor Award: Placed Top 5 of 1200 Trainees
Basic Military Training • 2017
"In recognition of remarkable performance in Basic Military Training. You led the way for those around you and set the example for every Airman in every squadron."

Squadron Award: Top Graduate of 200 Trainees
Basic Military Training • 2017
"Your superior attitude, bearing, discipline, appearance, physical fitness, and academic performance epitomized our Air Force Core Values and set you apart from your peers."

Flight Award: Most Outstanding Airmen of 50 Trainees
Basic Military Training • 2017
"You exemplify the 'whole-person concept' which set you apart, increased esprit de corps, and were critical to the success of your flight."

Thunderbolt Fitness Excellence Award
Basic Military Training • 2017
"For exceptional dedication to physical fitness and esprit de corps, laying the foundation for success in the United States Air Force."

PROJECTS

React App: Pathfinding Visualizer
pathfinder.page • Dec 2020 – Apr 2021
• Built React application for visualizing pathfinding and procedural maze generation.
• Implemented six pathfinding algorithms and one recursive division algorithm.
• Designed fully responsive front-end with scaling, viewport-dependent visualization speed and comprehensive user input error handling.

Hardware Project: Sunsabers
sunsabers.com • 2020 – 2021
• Conceptualized and designed lightsaber components with Fusion 360 and Cura.
• Manufactured lightsaber components with PLA and FFF 3D printing technology.
• Used components to assemble advanced, movie-like, duel-ready lightsabers with CF-X microcontrollers and NeoPixel LEDs.