

# 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

### 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.”

### Small Arms Expert Marksmanship Award

Basic Military Training • 2017

“For completing the weapons qualification course on the M16 rifle and achieving an above-average score, demonstrating patience and precision throughout.”

## 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 pixel-perfect adapting node dimensions.

### 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.