

# Ryan Brynjolfson

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## EDUCATION

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### Cornell University – Ithaca, NY

B.S in Mechanical Engineering, Minor in Aerospace @ Cornell Engineering

Anticipated Graduation: 05/2027

- Accomplishments: NCAA Division I Varsity Athlete (Track and Field); Vice President at TECH4SCHOOLS
- Relevant Coursework: Fluid Dynamics, Thermodynamics, Mechanics of Materials, Dynamics, System Dynamics, Statics, Physics 3 Waves and Oscillations, Physics 2 Electromagnetism

## EXPERIENCE

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### KLJ Engineering - Aviation Engineering Intern | Bismarck, ND

06/2025- 08/2025

- Developed airport layout plans and capital improvement plans for 9 regional airports in North Dakota while cross-referencing the required **FAA regulations and statutes**.
- Gained **field experience** at a Hazen airport rehabilitation project; supervised contractors who completed the project 32 days before deadline (~25% reduction in completion time).
- Coordinated with city officials, airport managers, and the North Dakota Aeronautics Commission to align airport projects with funding availability; managed to reallocate \$200,000 in unrealized **FAA contract** expenditures.

### TECH4SCHOOLS Club – Vice President | Ithaca, NY

08/2024—03/2025

- Developed a homework-matching application leveraging **AI technologies**, including cosine similarity algorithms and LLaMA-3, to assist university students in finding relevant academic resources for their course material; had 237 Cornell University students download.
- Spearheaded the implementation of a new **UI Interface** within our app, boosting session duration by 31% and improving user satisfaction scores by 18%.

### Student Tutor – Physics 2: Electromagnetism | Ithaca, NY

08/2024—12/2025

- Reinforced and helped solidify topics to student athletes in Engineering Physics 2. Met with students twice a week to go over both homework problems and study preparation for tests.
- Learned how to **communicate** both at the level of the material and sometimes under it to help students digest difficult topics. One student experienced an increase in test scores by ~30% on average.

## PROJECTS

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### RC Airplane – Fusion 360 – Independent Project

06/2024

- Utilized **Fusion 360** and **Autodesk CFD** to analyze and determine initial airfoil and aircraft shape for a target altitude of 500' and a low Mach number (~0.1).
- Performed 2D **Finite Element Analysis (FEA)** by hand to determine an optimal profile at cruise altitude while accounting for pressure gradient, densities, and aerodynamic drag that vary with height; selected specific regions on body of aircraft and wings to analyze stress and strain maxima on Styrofoam, eventually optimizing weight by 11% from initial design.

### Go-Kart – Design and Fabrication – Independent Project

06/2025

- Designed and fabricated a go-kart frame using stick welding and scrap metal. Integrated a 6.5 HP Predator engine with a **SolidWorks**-modeled transmission, 2 speed gearbox, suspension system, and steering system.
- Validated design performance through ~20 sessions, reaching a max speed of 21 mph and exhibiting negligible frame fatigue or drivetrain wear (even in rough off-roading terrain).

## TECHNICAL SKILLS

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**Software:** Python, Java, MATLAB, AutoCAD, Autodesk CFD, SolidWorks, Creo, Microsoft Office, Word, Excel

**Engineering Knowledge:** FAA Regulations, Technical Documentation, Field Work, Rocket Nozzles, Pumps and Turbines, Airport Design, Simple Aircraft Design, Airfoil Analysis, Prompt Engineering, Large Language Models

**Interpersonal Skills:** Communication, Team Collaboration, Leadership