Professional Development Session

IR Prep and Resume Tips

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Agenda

- Introduction
- Industrial Roundtable
  - Strategy
  - Elevator pitch
  - Get interview
  - Get jobs
- International Students
  - Research company background
  - Communication
- IR Q&A
- Resume
  - Goal of a resume
  - Format suggestions
  - Building the perfect bullet point
- Resume Reviews

About Me

Bryce Tucker
Junior in AAE

- ASME External Vice President
- Test Stand Lead, PSP-Liquids
- Incoming Launch Engineering Intern, **SpaceX**
- New Glenn Manufacturing Engineering Intern, **Blue Origin**
- Engine Control Systems Project Engineering Intern, **Collins Aerospace**

Your Brand

- Coincides with your image
  - Think of companies you recognize easily - everything is cohesive
- Resume, Elevator Pitch, LinkedIn, etc. are facets of your brand
- How do you want others to perceive you?
- What sets you apart from everyone else?
  - Culmination of skills, experiences, and personality
- What do you offer?
- What are your goals and interest?

The EXPO Career Fair

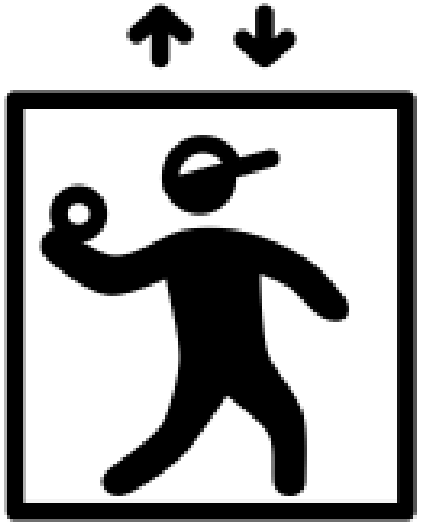
EXPO: The Goal

- Highlight what you're interested in and how your past experience aligns with that
- Showcase communication skills
- Indicate why you are there
  - Internship/job, specific area, etc.
- Engage with who you're talking to
  - Ask about what they do/teams at their company

You don't need to stick to a script

Elevator Pitch

- “Hello, how are you?”
  - Introduce yourself and get their name
- Highlight what you're looking for
- Keep it short
- Ask about specific opportunities
- Practice & experiment
- If a conversation starts out of your pitch, roll with it
  - Don’t just talk at them
  - Don’t just throw information at them



Preparation

- Know your resume
- Practice your elevator pitch
- Choose target companies
  - Map them out - Career Fair Plus
  - Apply online ahead of time
  - Plan questions
- *If you are going to talk to a company have a general idea of what they do*
- Network at prior events
  - ASME corporate banquet, company seminars - go talk to them after the event
- Get there early

Game Day Checklist

- Print a bunch of resumes (30ish?)
  - Have a digital version on your phone ready to upload with a clear file name
- Have a folder to put everything in
- Notepad - write down names and jobs
- Dress nice. It definitely matters
  - Men: Ex. jacket with no tie
  - Women: Ex. nice blouse or suit
- Some beverage (preferably water)
- Name tags are great too

Be the Question Master

- Do ask questions…
  - throughout the entire conversation
  - about the person you're talking to
  - you want to know the answer to
  - that are unique and thoughtful
  - about specific roles/positions
- Don't ask questions…
  - that can be Googled
  - that are generic
  - about pay

The Finisher

- Ask about current open positions
  - What are they hiring for at IR?
  - Use this to show interest in a specific role
- If you've already applied ask about next steps
- Ask how to continue the conversation
- “Thank you, _____”
- Connect on LinkedIn

International Students

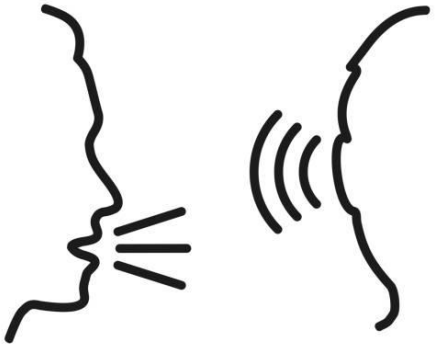
Navigating Job Applications and Recruitment

Research Company Background

- Target companies that hire international students.
- Use resources like Reddit or MyOPTJobs.
- Only ~20% of companies mention hiring non-US citizens explicitly on job applications.
- Skip applying to companies that state they don't hire non-US citizens.
    - If unclear, still apply—you might find hidden opportunities.

Communication

- Tell recruiters you're an international student immediately.
    - Saves time and helps clarify eligibility upfront.
- Double-check hiring policies in-person even if listed.
    - Some recruiters might have updated or conflicting info.



Final Strategies

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Prepare, prepare, prepare

Cast a wide net

Channel your inner early bird

Don’t be afraid to sell yourself

Bad interviews happen

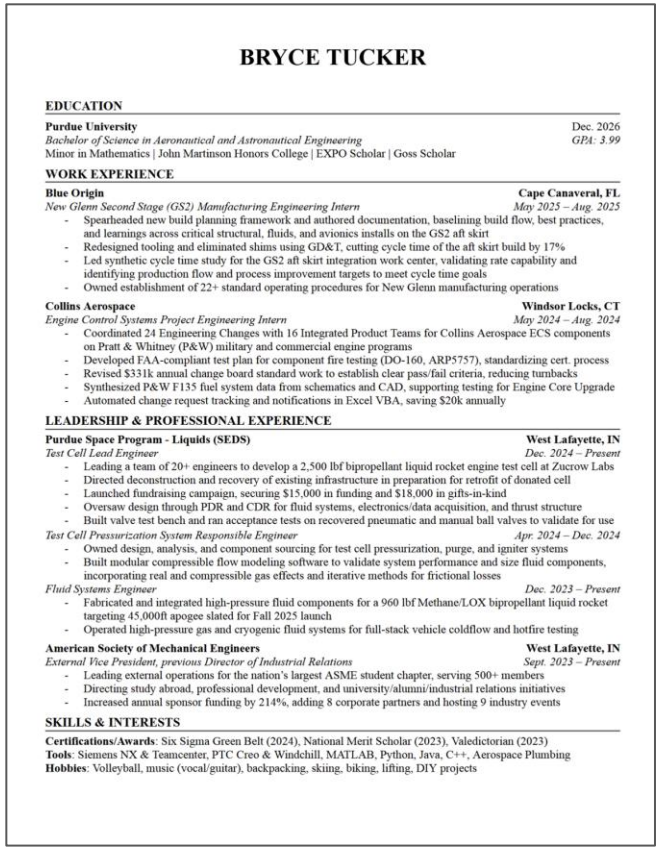
Be excited! You’ll do great!

Crafting a Good Resume

Resumes: The Goal

- Tell them who you are on one page
  - What sets you apart?
  - Paint a picture of how you think
- Introduce your skills and qualifications to an employer
  - What can you offer to the company?
  - Provide details on your accomplishments
- Demonstrate your impact

Sections



BRYCE TUCKER

EDUCATION

Purdue University Dec. 2026
Bachelor of Science in Aeronautical and Astronautical Engineering *GPA: 3.99*
Minor in Mathematics | John Martinson Honors College | EXPO Scholar | Goss Scholar

WORK EXPERIENCE

Blue Origin **Cape Canaveral, FL**
New Glenn Second Stage (GS2) Manufacturing Engineering Intern *May 2025 – Aug. 2025*
- Spearheaded new build planning framework and authored documentation, baselining build flow, best practices, and learnings across critical structural, fluids, and avionics installs on the GS2 aft skirt
- Redesigned tooling and eliminated shims using GD&T, cutting cycle time of the aft skirt build by 17%
- Led synthetic cycle time study for the GS2 aft skirt integration work center, validating rate capability and identifying production flow and process improvement targets to meet cycle time goals
- Owned establishment of 22+ standard operating procedures for New Glenn manufacturing operations

Collins Aerospace **Windsor Locks, CT**
Engine Control Systems Project Engineering Intern *May 2024 – Aug. 2024*
- Coordinated 24 Engineering Changes with 16 Integrated Product Teams for Collins Aerospace ECS components on Pratt & Whitney (P&W) military and commercial engine programs
- Developed FAA-compliant test plan for component fire testing (DO-160, ARP5757), standardizing cert. process
- Revised $331k annual change board standard work to establish clear pass/fail criteria, reducing turnbacks
- Synthesized P&W F135 fuel system data from schematics and CAD, supporting testing for Engine Core Upgrade
- Automated change request tracking and notifications in Excel VBA, saving $20k annually

LEADERSHIP & PROFESSIONAL EXPERIENCE

Purdue Space Program - Liquids (SEDS) **West Lafayette, IN**
Test Cell Lead Engineer *Dec. 2024 – Present*
- Leading a team of 20+ engineers to develop a 2,500 lbf bipropellant liquid rocket engine test cell at Zucrow Labs
- Directed deconstruction and recovery of existing infrastructure in preparation for retrofit of donated cell
- Launched fundraising campaign, securing $15,000 in funding and $18,000 in gifts-in-kind
- Oversaw design through PDR and CDR for fluid systems, electronics/data acquisition, and thrust structure
- Built valve test bench and ran acceptance tests on recovered pneumatic and manual ball valves to validate for use

Test Cell Pressurization System Responsible Engineer *Apr. 2024 – Dec. 2024*
- Owned design, analysis, and component sourcing for test cell pressurization, purge, and igniter systems
- Built modular compressible flow modeling software to validate system performance and size fluid components, incorporating real and compressible gas effects and iterative methods for frictional losses

Fluid Systems Engineer *Dec. 2023 – Present*
- Fabricated and integrated high-pressure fluid components for a 960 lbf Methane/LOX bipropellant liquid rocket targeting 45,000ft apogee slated for Fall 2025 launch
- Operated high-pressure gas and cryogenic fluid systems for full-stack vehicle coldflow and hotfire testing

American Society of Mechanical Engineers **West Lafayette, IN**
External Vice President, previous Director of Industrial Relations *Sept. 2023 – Present*
- Leading external operations for the nation's largest ASME student chapter, serving 500+ members
- Directing study abroad, professional development, and university/alumni/industrial relations initiatives
- Increased annual sponsor funding by 214%, adding 8 corporate partners and hosting 9 industry events

SKILLS & INTERESTS

Certifications/Awards: Six Sigma Green Belt (2024), National Merit Scholar (2023), Valedictorian (2023)
Tools: Siemens NX & Teamcenter, PTC Creo & Windchill, MATLAB, Python, Java, C++, Aerospace Plumbing
Hobbies: Volleyball, music (vocal/guitar), backpacking, skiing, biking, lifting, DIY projects

Header: Name, phone number, email, LinkedIn link

Education: Degree (major/minor), GPA, Graduation date

Relevant Experience: Work history, team projects, description of activity with location

Activities and Research: Extracurricular activities, school/technical involvements, description of activity with location

Order of list items should be based on relevance/ chronological

Skills: Relevant, mentioned elsewhere & summarized here

Awards/Certs: Awards, honors, short description with year

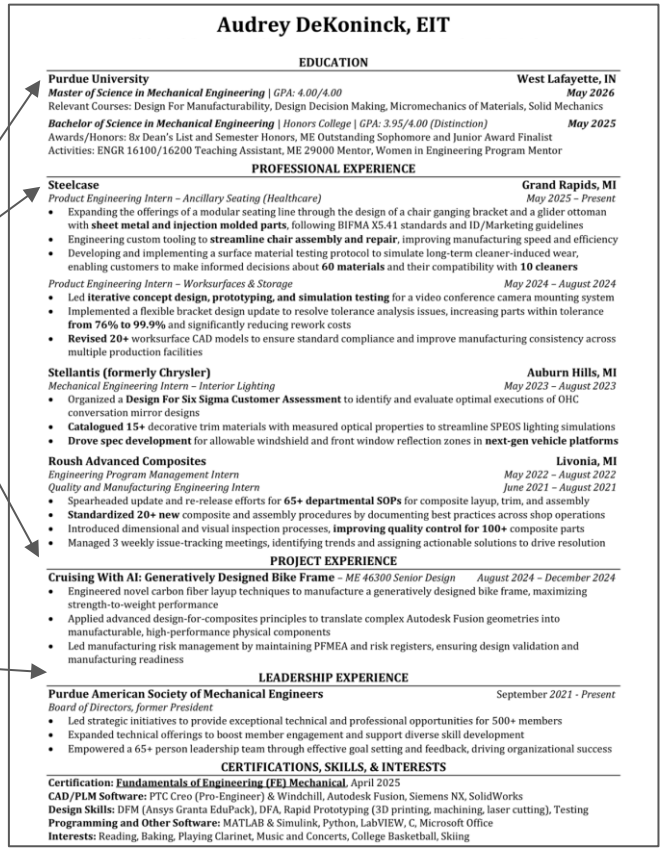
Include if important or to fill space

Formatting

One page only!

Keep it consistent

Avoid Cluttering
- Modest Margins
- Good Spacing



Audrey DeKoninck, EIT

EDUCATION

Purdue University — **West Lafayette, IN**
Master of Science in Mechanical Engineering | *GPA: 4.00/4.00* — ***May 2026***
Relevant Courses: Design For Manufacturability, Design Decision Making, Micromechanics of Materials, Solid Mechanics

Bachelor of Science in Mechanical Engineering | *Honors College* | *GPA: 3.95/4.00 (Distinction)* — ***May 2025***
Awards/Honors: 8x Dean's List and Semester Honors, ME Outstanding Sophomore and Junior Award Finalist
Activities: ENGR 16100/16200 Teaching Assistant, ME 29000 Mentor, Women in Engineering Program Mentor

PROFESSIONAL EXPERIENCE

Steelcase — **Grand Rapids, MI**
Product Engineering Intern – Ancillary Seating (Healthcare) — *May 2025 – Present*
- Expanding the offerings of a modular seating line through the design of a chair ganging bracket and a glider ottoman with **sheet metal and injection molded parts**, following BIFMA X5.41 standards and ID/Marketing guidelines
- Engineering custom tooling to **streamline chair assembly and repair**, improving manufacturing speed and efficiency
- Developing and implementing a surface material testing protocol to simulate long-term cleaner-induced wear, enabling customers to make informed decisions about **60 materials** and their compatibility with **10 cleaners**

Product Engineering Intern – Worksurfaces & Storage — *May 2024 – August 2024*
- Led **iterative concept design, prototyping, and simulation testing** for a video conference camera mounting system
- Implemented a flexible bracket design update to resolve tolerance analysis issues, increasing parts within tolerance **from 76% to 99.9%** and significantly reducing rework costs
- **Revised 20+** worksurface CAD models to ensure standard compliance and improve manufacturing consistency across multiple production facilities

Stellantis (formerly Chrysler) — **Auburn Hills, MI**
Mechanical Engineering Intern – Interior Lighting — *May 2023 – August 2023*
- Organized a **Design For Six Sigma Customer Assessment** to identify and evaluate optimal executions of OHC conversation mirror designs
- **Catalogued 15+** decorative trim materials with measured optical properties to streamline SPEOS lighting simulations
- **Drove spec development** for allowable windshield and front window reflection zones in **next-gen vehicle platforms**

Roush Advanced Composites — **Livonia, MI**
Engineering Program Management Intern — *May 2022 – August 2022*
Quality and Manufacturing Engineering Intern — *June 2021 – August 2021*
- Spearheaded update and re-release efforts for **65+ departmental SOPs** for composite layup, trim, and assembly
- **Standardized 20+ new** composite and assembly procedures by documenting best practices across shop operations
- Introduced dimensional and visual inspection processes, **improving quality control for 100+** composite parts
- Managed 3 weekly issue-tracking meetings, identifying trends and assigning actionable solutions to drive resolution

PROJECT EXPERIENCE

Cruising With AI: Generatively Designed Bike Frame – *ME 46300 Senior Design* — *August 2024 – December 2024*
- Engineered novel carbon fiber layup techniques to manufacture a generatively designed bike frame, maximizing strength-to-weight performance
- Applied advanced design-for-composites principles to translate complex Autodesk Fusion geometries into manufacturable, high-performance physical components
- Led manufacturing risk management by maintaining PFMEA and risk registers, ensuring design validation and manufacturing readiness

LEADERSHIP EXPERIENCE

Purdue American Society of Mechanical Engineers — September *2021 - Present*
Board of Directors, former President
- Led strategic initiatives to provide exceptional technical and professional opportunities for 500+ members
- Expanded technical offerings to boost member engagement and support diverse skill development
- Empowered a 65+ person leadership team through effective goal setting and feedback, driving organizational success

CERTIFICATIONS, SKILLS, & INTERESTS

Certification: Fundamentals of Engineering (FE) Mechanical, April 2025
CAD/PLM Software: PTC Creo (Pro-Engineer) & Windchill, Autodesk Fusion, Siemens NX, SolidWorks
Design Skills: DFM (Ansys Granta EduPack), DFA, Rapid Prototyping (3D printing, machining, laser cutting), Testing
Programming and Other Software: MATLAB & Simulink, Python, LabVIEW, C, Microsoft Office
Interests: Reading, Baking, Playing Clarinet, Music and Concerts, College Basketball, Skiing

Font
- Common and easy to read
- Same on entire page
- Font size no smaller than ~11

Ensure Readability

Crafting The Perfect Bullet Point

I worked on a team that made parts for planes

Refrain from using personal pronouns.

Worked on a team that made parts for planes

*What did **you** do?*

What type of parts? What planes?

Designed structural components for landing gear of Gulfstream G650

Quantify. Elaborate.

To do… what?

Designed and analyzed 20 structural components using Solidworks for landing gear of Gulfstream G650, reducing weight of current components by 50%

Too long. Simplify!

Reduced weight of Gulfstream G650 landing gear by 50% through design and analysis of 20 components in Solidworks

Begin with results

Do's and Don'ts

Do:

- Organize your resume based on relevance/chronological order
- Consider different resumes for different disciplines
- *Optimize according to ATS*
- Ensure readability
- Check for grammar
- *Firstname Lastname Resume 20XX*

Don't:

- Use a MS Word template. Ever!!!!!
- Include color (unless a recruiter or contact mentions it)
- Include high school information if possible
- Repeat action verbs
- Have an image of yourself
- Use passive voice or first person
- Have more than 1 page

Resume Review Opportunities

Get as many eyes on your resume as possible!

- MyCCO
- Purdue ME Company Days
- ASME Office Hours

Thank you!

Stick around to get your resume reviewed!

Bryce Tucker: tucke193@purdue.edu

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