Bailey A. Tincher

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Education:	**University of Illinois - 3.81 GPA / 85 Credit Hours**	Urbana-Champaign, IL
	● Pursuing a dual major with Computer Science and Engineering Physics	Aug. 2017 - Present
	● James Scholar and Dean's List Honors	

Relevant Courses:

Data Structures, Computer Architecture, Discrete Structures, CS Pedagogy Practicum, Quantum Physics, Thermal Physics, Electricity and Magnetism, Mechanics, Relativity, Honors Fundamental Mathematics, Honors Vector Calculus, Differential Equations

Work Experience:

University of Illinois - Department of Computer Science — Urbana-Champaign, IL

CS 125 Course Developer - Part Time — Aug. 2018 - Present

CS 125 Course Assistant - Volunteer — Jan. 2018 - Aug. 2018

- Focusing on enabling first year computer science majors to begin developing key problem solving strategies through the development of course infrastructure
- Identified and led a project to expand office hours to student residence halls resulting in increased carrying capacity and the elimination of queue meltdown
- Collaborating with fellow developers to deploy current course machine problems to Android applications with the goal of increasing student interactivity with front end layout

Illinois Tool Works (ITW) - Fortune 200 Company — Beecher, IL

Process Engineering Intern - Full Time — May 2018 - Aug. 2018

Design Engineering Intern in the Welding Segment - Full Time — May 2017 - Jan. 2018

- Applied the ITW toolbox, agile project management, lean manufacturing, and 80/20 core principles to improve business processes
- Co-led a 2 month project with the VP/GM on a highly collaborative effort to overhaul and optimize the layout of a 100,000 sqft. manufacturing floor
- Self-started a comprehensive data analysis project with the shipping team and VP/GM that applied Python data science libraries to visualize the efficiency of the business unit's finished goods layout consisting of 500,000 picks/yr across 185 bin locations
- Constructed a Microsoft Sharepoint site to automate interdepartmental engineering workflows leading to over 100hrs of annualized time savings
- Supported the facility manager and engineering team in designing and implementing a state of the art conveyorized assembly line that doubles production throughput
- Supported the lead design engineer by conducting extensive research on a cutting-edge welding gun innovation that is now the key patented feature of Miller Electric's next generation commercial MIG gun product line

Activities/Honors:

Association of Data Science and Analytics (ADSA) — Urbana-Champaign, IL

Advanced Workshops Committee Member — April 2018 - Present

Team Projects Contributor — Aug. 2017 - May 2018

- Team member of a committee developing a brand new introductory data science program that teaches advanced Python techniques, the fundamentals of common algorithms, and guide our students through mini projects to reinforce concepts
- Participated in semester long team projects with the goal of developing our understanding of advanced Python features such as modules, lambda functions, and ORM SQL storage

Boy Scouts of America — New Lenox, IL

Eagle Scout — Aug. 2005 - June 2017

Senior Patrol Leader — Aug. 2015 - June 2017

- Proposed, developed, and organized an unprecedented electronics sustainability event leading a team of fellow scouts, school administrators, and business leaders to collect and repurpose over 500lbs of electronic waste from my community
- Initiated a partnership with Morning Star Mission to collect and repurpose cell phones as emergency call devices for poverous women and children

Projects:

N-Slit Diffraction Physics Education Simulation (*React.js, P5.js*) — Aug. 2018 - Present

Developing a web application for the University of Illinois Department of Physics that will serve as an educational tool to demonstrate the quantum physical phenomenon of diffraction

Amazon Alexa News Web Scraper (*Python, Flask, SQLAlchemy, AWS*) — Jan. 2018 - May 2018

Collaborated with fellow ADSA projects members to deploy an Amazon Alexa Skill and Python package that web scrapes top news sources such as CNN and The Guardian for daily headlines and reads back tailored selections to the user

AFJROTC Corps Events Tracking Database (*Java, SQL, Apache POI*) — Aug. 2016 - May 2017

As part of a senior honors project I developed a Java applet and the backend infrastructure necessary to automate community service and corps event tracking for my unit resulting in the elimination of the need for a second manual data entry staffing role

Software Experience:

Python (Advanced), MS Office/Sharepoint Designer (Advanced), SolidWorks (Advanced), Linux (Intermediate), Java (Intermediate), C++ (Intermediate), P5.js (Basic), React.js (Basic), Flask Microframework (Basic), Amazon RDS (Basic), IBM wIntegrate Scripting (Basic)