# Bailey A. Tincher

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## *Education:*

**University of Illinois at Urbana-Champaign** 3.82 / 4.0 GPA

- Bachelors of Science in Computer Science Aug. 2017 - May 2021
- Minors in Quantum Physics and Mathematics
- **Relevant Courses**: Artificial Intelligence, Machine Learning, Quantum Information Processing Theory, Quantum Physics, Algorithms, Systems Programming

## *Skills:*

- ***Advanced:*** Node.js, Python, AWS Serverless, REST API's, Public Speaking, Initiative
- ***Proficient:*** C/C++, Java, SciPy libraries, React.js, NoSQL, Linux, Git, Least-Privileged Security, Agile
- ***Familiar:*** CI/CD, IBM Qiskit, Tensor Flow, OAuth 2.0, Open-Source Development
- ***Achievements:*** AWS Certified Cloud Practitioner | Eagle Scout | Dean's List

## *Projects:*

**QUIUC - Undergraduate Quantum Computing at Illinois** https://www.quiuc.org

*Founder and President* Mar. 2019 - Present

- Started the first undergraduate quantum computing organization of over 125 students, where we create and teach open-source workshops, team up on research projects, and maintain a talent pipeline to academia and industry
- Developed a universal quantum computing simulator from scratch in Python that implemented Phase Estimation, the Quantum Fourier Transform, and Shor's Algorithm to factor integers
- Designed an N-slit diffraction simulation web app for the Physics department to aid in teaching quantum mechanics

**Association of Data Science and Analytics (ADSA)** https://adsa.cs.illinois.edu

*President* Aug. 2019 - Present

*Advanced Workshops Committee Member* Aug. 2017 - Present

- Teaching machine learning workshops to over 50 students every week to build up undergraduates on campus with the skills to collaborate on future team projects
- Implemented a Markov Chain Tweet generator in Python that web scraped Tweet's and accepted a text sentiment bias
- Partnering with the College of Business to host a sports datathon in Spring 2020 to expose athletic coaches to big data

**Overheard App** Champaign, IL

*AWS Backend Developer* Apr. 2019 - Present

- Establishing a new social media app "Overheard", offering a map-centric view of nearby activity and amusing conversation
- Architecting decoupled, RESTful micro-services with the Serverless Framework, Lambda, Dynamo DB, and Elasti-Cache
- Monetizing our platform through targeted, non-intrusive ads that integrate natively into the app's map as posts

## *Work Experience:*

**State Farm Research and Development Center - Fortune 50 Company** Champaign, IL

*Software Engineering Intern - Full Time* May 2019 - Aug. 2019

- Executive's Choice Winner of the 2019 State Farm Hack Day across 1000+ developers company wide, leading a small team as the full stack developer on a computer vision project to improve customer data entry at the scene of an accident
- Integrated a full stack voice app in under 12 weeks that simplified the filing process of 40k+ claims/day, pitched the concept to a corporate executive, and sought out risk management and security teams to bring it near production

**University of Illinois - Department of Computer Science** Champaign, IL

*CS 125 Course Developer - Part Time* Jan. 2018 - Present

- Advancing CS education for a course of 900+ students by creating innovative tools in a start-up like environment
- Initiated a project to expand office hours to residence halls across campus to improve student and volunteer attendance

**Illinois Tool Works (ITW) - Fortune 200 Company** Chicago, IL

*Data Analytics Intern - Full Time* May 2017 - Jan. 2019

- Worked directly with the VP/GM on a data-driven, "Front-to-Back" 100,000 square foot plant redesign leveraging Python to optimize the part picking workflow at a scale of 500,000 picks per year
- Collaborated with the product management and supply chain teams to conduct an 80/20 analysis in Python across 40,000 parts and $100M+ in sales to eliminate underutilized inventory and identify supply chain complexity