

# Alan Wang

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## Education

### Lehigh University

Bachelor of Science Computer Science and Business  
Minor in Data Science and Chinese  
Cumulative GPA: 3.80 | Major GPA: 3.85

Bethlehem, PA  
Expected May 2022

## Skills

- Proficient with Java, Python, C, C++, Rust, SQL, PL/SQL, Mech-Lang, AGILE (Scrum), Essence, Git
- Comfortable with HTML/CSS, JavaScript, Embedded Systems, STM 32, Android Programming, MATLAB, Arduino
- Soft Skills: Bilingual Communicator (English, Mandarin Chinese), Leader, Research

## Work Experience

### Mech Forward Robotics Research

Bethlehem, PA  
June 2020 - Present

#### Undergraduate Researcher

- Refactoring Core and Syntax code base using Rust and strategized solutions to help increase performance
- Gathered information on 70+ middle schoolers and analyzed student's demands for new programming language
- Helped design new middle school robotics program using Mech-Lang and Sphero
- Mech's Website: <http://mech-lang.org>

### BlueJoy Shanghai LLC. (上海蓝精灵科技股份有限公司)

Shanghai, China  
June 2019 – July 2019

#### Software Engineering Intern

- Learned and worked with embedded environments, STM32 microcontrollers, and ST-Link
- Invented and implemented a development pipeline on Unix terminal used by 2 other software engineers at BlueJoy
- Assisted in developing and debugging drivers for embedded systems using C

### Fundamentals of Programming Course (Java) and Systems Software (C)

Bethlehem, PA  
August 2019 – Present

#### Teaching Assistant

- Providing assistance to professor and mentoring 250+ undergraduate students in labs and assignments in Java and C
- Holding office hours for students who need extra assistance

## Projects

### P2P Software Project

August 2020 – Present

- Leading a five-member team on rollout of a Java interactive P2P software focusing on the entire AGILE process
- Implementing front end and back end features for central, network, and database subsystem and wrote large scale test codes

### Blockchain Project

August 2020 – Present

- Working as part of a three-member team to design and implement a private blockchain using Java and Python with Merkle/Patricia tree structure, light node validation, and proof of membership/non-membership
- Focused on tree design/implementation, block index structure algorithm, and writing test cases using Python scripts

### Bank Management System Database Project

January 2020 – May 2020

- Designed and implemented an Oracle SQL database system using SQLDeveloper to emulate functionalities of a bank with transactions, accounts, loans, cards, etc.
- Learned the designing process of creating a database system through ER Design, Relational Schema, Data Generation, and Interface coding on Java while considering data concurrency, normalization, and query optimization

## Leadership

Asian Cultural Society, *Club Treasurer*, Bethlehem, PA

April 2019 - Present

Fitness and Nutrition Club, *Social Media Chair*, Bethlehem, PA

November 2019 - Present

Lehigh Rapidly Accelerated Research Experience, *Research Fellow*, Bethlehem, PA

August 2018 - Present

Leadership Enterprise for a Diverse America Career Institute and LEDA Alumni, *Fellow*, NYC, NY

August 2019 - Present

Princeton IvyG Conference for First Generation Students, *Fellow*, Princeton, NJ

February 2019

## Award

4 Dean's List Awards, AP Scholar with Honor Award 2017, Won Lehigh Make-a-thon Innovation Minds Competition 2018