ANDY ZOU

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# EDUCATION

## Binghamton University, SUNY, Thomas J. Watson College of Engineering and Applied Science

*Master of Science in Mechanical Engineering Graduated May 2020*

*Bachelor of Science in Mechanical Engineering Graduated May 2019*

GPA: 3.53/4.00, Cum Laude

Dean’s List Honors: Fall 2015, Spring 2016, Spring 2017, Fall 2018

# TECHNICAL SKILLS

AWS, SQL, Java, JavaScript, Python, MATLAB, Angular, Spring Boot, HTML, CSS, Creo (Pro/E), ANSYS, Microsoft Office

# EXPERIENCE

## Vanguard Malvern, PA

*Data Engineer (Contract Developer) November 2022 – Present*

* Developed queries and collaborated with multiple teams to validate our data and to improve the accuracy of code
* Led a collab session with the team where I explained ASCII codes and how we could use them to remove special characters in our tables
* Assisted all members of the team by helping to explain concepts, improve queries, troubleshoot errors, and more
* Created detailed documentation in Confluence for rotating access keys and for validating data using AWS Athena
* Developed queries that helped to determine unnecessary trim stories, allowing the team to descope 15 story points
* Discovered an issue affecting all clients when validating a team member’s code, immediately reverted the changes
* Brought up an inconsistency I saw with our team’s testing procedures and communication to push for a safer and more standardized process

## Xpanxion Malvern, PA

*Java Full Stack Academic Intern May 2022 – November 2022*

* Developed knowledge in Java, HTML, CSS, HTML, MySQL, AWS
* Developed an employee management CRUD application using Spring Boot and Angular
* Managed a team to develop a restaurant themed CRUD application and deploy it onto AWS
* Thoroughly explained concepts and problems to coworkers to help improve their understanding

# PROJECTS

## Financial Web Application Malvern, PA

*Team Lead and Front-End Specialist September 2022 – October 2022*

* Developed a CRUD application allowing users to track their financial goals
* Wrote methods to calculate and display monthly payments and balances to the user
* Used Google Chart API to allow users to visualize their data via donut charts
* Implemented the ability to register multiple users so that every goal could be tied to a specific user
* Used Bootstrap, Angular Materials, and CSS to style each component

## Restaurant Web Application Malvern, PA

*Team Lead and Front-End Specialist August 2022*

* Developed a full stack CRUD web application using Spring Boot and Angular
* Led stand-up and stand-down meetings to coordinate tasks and ensure completion of the project
* Built the UI using HTML, CSS, and JavaScript
* Deployed application online using AWS Elastic Beanstalk, S3, and RDS
* Created Kanban boards, Entity Relationship Diagrams, and wireframes to organize goals and structure

## Robotic Manipulator for Rover Binghamton, NY

*Systems Engineer Fall 2018 – Spring 2019*

* Collaborated with a team to design a robotic arm for various tasks, such as pressing buttons and lifting weights
* Designed custom 3D printed parts for the arm in Creo (Pro/E) and modeled the entire arm assembly in Creo (Pro/E)
* Selected parts and motors by determining required strengths and torques through ANSYS and hand calculations
* Assembled parts and tested the strength and ability of the manipulator to perform tasks through various tests
* Developed a detailed design report, including the project scope, a Gantt chart, results, a bill of materials, and more