

# Ying Tu

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## EDUCATION

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| <b>University of Southern California, U.S.</b><br><i>Master of Science in Computer Science</i><br>Course work: Intro to Programming System Design, Database Systems, Analysis of Algorithms, Operating Systems                    | <b>Expected May. 2025</b><br><b>GPA: 4.0/4.0</b>                                     |
| <b>National Taiwan University, Taiwan</b><br><i>Master of Science in Chemical Engineering</i><br><b>National Taiwan University, Taiwan</b><br><i>Bachelor of Science in Chemical Engineering</i><br>Dean's List: 2015, 2016, 2018 | <b>Jan. 2022</b><br><b>GPA: 3.98/4.0</b><br><b>Jun. 2019</b><br><b>GPA: 3.95/4.0</b> |

## SKILLS

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| <b>Language</b>               | Python, JavaScript, Java, HTML/CSS, SQL, C   |
| <b>Tools &amp; Frameworks</b> | React, Node.js, Express.js, React Native, Android, Material UI, Jest, Flask, MySQL, MongoDB, Docker, Linux, Git, GitHub Actions, REST API, GraphQL, Microsoft Office, AWS, GCP |
| <b>Certifications</b>         | <b><u>AWS Cloud Practitioner</u></b>   |

## PROFESSIONAL EXPERIENCE

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| <b>Unit Operations Teaching Assistant   National Taiwan University, Taiwan</b><br>• Led a class of more than 30 students in equipment setup and experiment execution<br>• Identified over five issues within student work during each experiment, fostering group discussions to encourage brainstorming<br>• Discovered inefficiencies in workflow from nine experiments and proposed ways to cut down experiment time by 20% | <b>Feb. 2020 - Jun. 2020</b> |
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## PROJECTS

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| <b><u>Mobile eBay Search App</u></b><br>• Developed a Android mobile application, allowing users to search for eBay products and create a customized wishlist<br>• Familiarized with Cloud services by deploying back-end server to AWS to handle HTTP requests<br>• Decoupled API requests from fragments for clean design and ease of maintenance, reducing development time by 25%  | <b>Dec. 2023</b> |
| <b><u>YouTube Clone</u></b><br>• Engineered a serverless and scalable back-end system with Google Cloud Platform to manage up to 80 concurrent user requests.<br>• Deployed a video processing service that reduced video sizes by 90%, thereby enhancing overall system performance.<br>• Employed server-side rendering techniques to accelerate website loading times   | <b>Sep. 2023</b> |
| <b><u>Portfolio Website - <a href="https://yingtu35.github.io/">yingtu35.github.io/</a></u></b><br>• Minimized image sizes and improved page render time from 5s to less than 500ms<br>• Implemented CSS for animation on 20 areas including texts, images, and buttons to introduce better user interaction<br>• Applied responsive web design with CSS media queries to let website adapt to various screen sizes and platforms  | <b>Jul. 2023</b> |
| <b><u>Rate Repository</u></b><br>• Designed a front-end view using React Native and Apollo Client to search, rate, comment, and link to mock GitHub repositories<br>• Utilized caching for data retrieval to lower 20% network requests, debouncing to reduce page re-render on repository searching, and pagination for a responsive interface  | <b>Jun. 2023</b> |
| <b><u>Blog App</u></b><br>• Created a full-stack application with React, Express.js, Node.js, and MongoDB for users to view, post, and share blogs;<br>Containerized app with Docker for quick development and deployment<br>• Automated testing and linting with GitHub Actions to ensure software quality and shorten overall time by 50%  | <b>Apr. 2023</b> |
| <b><u>Christmas Attractions Map</u></b><br>• Led a team of four members to develop a Christmas Attractions-oriented interactive map; Integrated trending posts from Instagram and display posts at respective locations on map with Google Map API<br>• Assigned tasks and orchestrated collaboration by verifying data coherence; Completed project one week ahead of schedule<br>• Introduced 60 attractions and 270 high-rated restaurants within 500 meters of attractions to provide well-rounded experience;<br>Received positive reviews from 100 users | <b>Jan. 2022</b> |

## AWARDS

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| <b>1st Place Award, Team Leader of Four, CTCL Youth Leadership Program, Taipei</b> | <b>Jul. 2019</b> |
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