

**Zihan Wang (Tony)** | Seeking New Grad positions, open to Intern/Co-op  
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## EDUCATION

**Texas A&M University**, College Station, TX *Master of Computer Science (with scholarship)* Graduate: May.2024  
**University of Texas at Dallas**, Richardson, TX *Bachelor of Science in Computer Science* Graduate: May.2021

## WORK EXPERIENCES

**KBR, Inc. (Contractor to the United States Geological Survey)**, Sioux Falls, SD, USA *May. 2023 – Dec. 2023*  
*Machine Learning Engineer Intern* (Role: ML/AI Engineer)

- Designed and refined models specifically for identifying cloud masks in legacy MSS satellite images for the USGS, achieved a prediction accuracy rate of **86%** in evaluations, greatly surpassing the current related GIS algorithm.
- Adopted ensemble learning in **deep learning**, combined the residual blocks of **ResNet** for down-sampling to capture deep features with the traditional **UNet** architecture for up-sampling to capture contextual information.
- Authored automated scripts in **Python**, **Shell** and **R** to collect, clean and pre-processing images from data sources, with utilized TensorBoard, **SageMaker**, EC2, EBS, and S3 in **AWS** for model deployment and resource management.
- Enabled the USGS to elevate cloud detection capabilities in legacy MSS satellite images to levels comparable to modern satellites, greatly assisting the USGS in observing national terrain changes over the past decades.

**Amazon.com, Inc.**, Austin, TX, USA *May. 2022 – Aug. 2022*  
*Software Development Engineer Intern* (Role: Cloud Developer, AWS)

- Constructed a **search system** in AWS for my team, achieving an **85%** improvement in log ingestion efficiency, significantly cutting down ticket handling time and boosting team productivity.
- Adopted and refined best practices for **centralized logging with OpenSearch (CLOS)** in distributed system, ensured the security through Lambda functions based encryption with **Python** and implemented networks restrictions.
- Combined multiple AWS services, including **S3**(Ultrawarm) for scalable log storage, **Kinesis Firehose** for seamless log data delivery, **ElasticSearch** for efficient log ingestion and search, and **EC2** instances to host the Kibana.
- Automated the cloud deployment of the system to a new AWS production account using **TypeScript (AWS CDK)** after **unit, integration** and **Alpha tests**, integrating it as a new component of the team's core **distributed system**.

**DerbySoft, Inc.**, Dallas, TX, USA *Dec. 2020 – Jul. 2021*  
*Software Engineering Intern* (Role: Java Developer, Full Stack)

- Developed and maintained our service portal functionality within an Agile team, meeting client specifications and ensuring production environment's reliability by addressing 20+ maintenance issues and 17 development stories.
- Adjusted database queries related to ticket information during on-call, tested APIs with Postman, made code corrections, participated in UI development for new clients, and maintained sprint documents as responsibility.
- Acquired hands-on experience with Agile software development with Jira, identifying and resolving issues in Spring MVC with Visual Studio, performed version control with Git, and managing tasks with Bitbucket.

## TECHNICAL SKILLS

- Programming Languages:** Java, Python, TypeScript, JavaScript, C++, SQL, Shell, Bash, R
- Framework & API:** J2EE, Flask, Spring MVC, Node.js, RESTful, Pandas, Matplotlib, NumPy, Torch
- Frontend Technology:** HTML, CSS, React, Java Server Pages, jQuery, Bootstrap
- Database & Middleware:** MySQL, Microsoft SQL Server, DynamoDB, ElasticSearch, Spark, Hadoop
- DS/ Machine Learning:** Pattern Recognition, Neural Networks, Image Segmentation, Regressions, SageMaker
- Tools & Others:** AWS, Docker, Linux/Unix, Ubuntu, Agile/Scrum, JIRA, Git, Bitbucket

## CERTIFICATIONS

- AWS Certified Cloud Practitioner:** ID: 2P771062P214QF9B *Jul. 2020 – Jan. 2026*
- AWS Certified Developer - Associate:** ID: CJ5WP20CQB44QE94 *Jan. 2023 – Jan. 2026*

## ACADEMIC PROJECTS

**A simulation of an online food store, Full Stack | UTD-CS6314 (graduation project)** *Mar. 2021 – May. 2021*

- Developed a full-stack web application with shopping cart, check out features and owner management system.
- Utilized Java Spark and MySQL for backend APIs, and HTML, CSS, JavaScript in Bootstrap for UI.
- Ensured efficient communication within the architecture through extensive use of HTTP methods (GET, POST).