

Jacob Tang

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GitHub | LinkedIn | Portfolio

SOFTWARE ENGINEERING INTERN

Teaching Assistant in C# web design, ASP.NET MVC, and Unity3D game development with a solid background in programming, algorithms, and standard software development best practices such as object-oriented programming, DevOps, and GIT source control

WORK EXPERIENCE

Minnesota State University – *Mankato, MN, USA*

Jan 2024 – Present

Teaching Assistant

Taught and tutored multiple senior courses in computer science, Data science, AI and machine learning

- Assisted professor in course delivery for CIS 414 C# Advanced object-oriented programming and design patterns in **Unity3D** and CIS 483 Full Stack Web design with ASP.Net MVC and SQL backend and JavaScript HML CSS front End
- Led sessions on the intro to Debugging, DevOps and covering topics on Git (source control, commits, merges, and conflict resolution etc.)
- Tutored CIS 414 Data science students on big data cleaning, visualization and machine learning
- Tutored CIS 496 Azure Cloud Services on various services like function apps etc.

Royal Dutch Shell - *Singapore*

Mar 2019 – Apr 2022

Regional Logistics Analyst

Responsible for supply chain reporting automation and data analytics for the Asia pacific region.

- Scrum coordinator and super user for the deployment of regional logistics control tower software. EDI integration with SAP R and TMS systems provided real time dashboards to the business stakeholders and customers. Achieved annual **\$1.5M USD** savings
- Engineered automated integrated logistics dashboard using SAP integration with Excel scripting, Python and Power Bi replaced manual dashboard. Resulted in 500 manual hours reduction or **\$108K USD** savings annually for continuous improvement initiative
- Developed automation tool that replaced manual SAP R order information updates with ABAP and Excel Scripting for customer operations. Tool liberated **300** manual hours reduction or **\$64K USD** savings annually
- Implemented optimization tool for production operations team that optimized human resource allocation. Tool played a critical role in reduced manpower costs by **\$1.84M USD** in 2020

PROJECT

Unity Space Flight Simulator | [GitHub Repo](#) - Mankato, MN

Aug 2023 - Present

Developed 1 to 1 scale interplanetary spaceship simulation in Unity

- Over 20,000 lines of code In Unity. Implemented with object oriented, design pattern principles and Git
- Custom HLSL ray marched Shaders for physically based atmospheric lighting
- Developed external physics module that replaced unity's built-in physics system that allowed realistic spacecraft behavior in orbit, utilizing non-linear numerical integrators, linear algebra and tensor math

SKILLS

Coding Languages (C#, C++, JavaScript, Python, SQL, HLSL, HTML/CSS)

Tools / Frameworks (ASP.net MVC, Unity3D, ReactJS, API, SQLite, pandas, Scikit-learn, TensorFlow)

Project Management (SCRUM, Agile, Sprint)

Microsoft Suite (Excel VBA, PowerPoint, Power Bi)

Languages (English, Chinese)

EDUCATION

Minnesota State University – Mankato, MN

Computer Information Technology

Aug 2022 – Dec 2024

AWARDS

Minnesota Data Derby - Minneapolis, MN

Apr 2024

- Team leader for data stompers, **1st place** winner for the graduate advanced category
- Visualized and predicted college tuition trends using Power Bi and Python machine learning

Midwest Undergraduate Data analytics competition - Mankato, MN

Mar 2024

- **Top 10** team out of 40 undergraduate teams
- Applied rigorous data cleaning, feature selection and as well as GIS satellite data for model training and prediction for green ammonia production facility placement

Royal Dutch Shell - Singapore

- Shell Q1/Q3 Vice President Award
- Shell People category Q4 Vice President Award
- Shell Integrated Value category Q4 Vice President Award
- Shell Special Recognition Award for automation (\$2000)

Others - Singapore

- International Space Challenge Grand Prize Winner (\$10,000)