TIANAO WANG

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EDUCATION

Undergraduate Education   Aug. 2020 - Present
Southern University of Science and Technology   Shenzhen, Guangdong, China
Member of Intelligent Medical Imaging Laboratory(iMED), supervised by Prof. Jiang Liu
GPA: 3.75/4.00 ; Ranking: 38/221 (top 17%)
English Proficiency
IELTS: 6.5 (L:6+R:7.5+W:6+S:5.5);

RESEARCH INTERESTS

Artificial Intelligence, Computer Vision, Deep Learning, Smart Healthcare, Data mining and analysis

ACADEMIC EXPERIENCES

Intracranial Aneurysm Automatic Detection and Auxiliary Diagnosis System   Aug 2022 - Jun 2023
Keywords: Keypoint Detection, ResNet, HRNet, Instance Segmentation, Mask2Transformer

· Goal: Built an end-to-end system utilizing DSA medical images to assist physicians in detecting and localizing intracranial aneurysms in patients.
· My contributions: Annotated data and performed endpoint key point detection on segments of intracranial arteries to segment each section. Integrated the location of the intracranial aneurysm to assist in generating medical reports.
· Outcome: Grade A in the curriculum of Group Research. The grand prize of the 17th National Extracurricular Academic Science and Technology Works Competition

Research on Neural Degenerative Disease Pathological Segmentation Algorithm Based on Pre-trained Large Models   Jun 2023 - now
Keywords: Segment Anything Model, Semantic Segmentation, Fine-tuning, Prompt

· Goal: Develop a neural degenerative disease pathological segmentation algorithm based on fundus image data and visual pre-trained models, assisting doctors in accurate diagnosis of neural degenerative diseases.
· My contributions: Fine-tuning the SAM pre-trained model, combined with traditional segmentation methods, automates the extraction of features from fundus image data and performs semantic segmentation of patients' fundus images.
· Outcome: Expected to produce one research paper and make it the graduation project.

COURSE PROJECTS

Analysis and Prediction of Asteroid Mechanical Stability |*Machine Learning, Data Analysis, Python*
                                                                          Aug 2022 - Sept 2022
· Outcome: Conduct mineralogical analysis and research on rocks found in surveyed asteroids, and utilize existing knowledge and data to predict the mechanical stability of unexplored asteroids.
· Assessment: One analysis report with an A grade (top 10%) and £300 Academic Recognition Scholarship to Oxford University (top 2%).

Gitme |*Soft Engineering, Java, Springboot, JGit, PostgreSQL, Redis*   Sept 2022 - Nov 2022
· Outcome: Implemented an online code hosting platform like GitHub, where the front and back end are separated and all services are deployed on the server.
· Assessment: Full score project in the curriculum of Oriented Object Analysis and Design, delivered one month ahead of schedule, aimed to provide SUSTech students with a code management hosting tool for internal use.

Real Estate Investment Insights |*Data Storytelling, Data Visualization, Tableau*   May 2023 - Jul 2023

· Outcome: Analyzed housing market data for Beijing spanning 2011 to 2017 and provided valuable insights to assist the executive management of a property investment firm in making informed decisions.
· Assessment: A compelling data storytelling presentation with an A grade at the National University of Singapore.

Sample Minisys CPU |*Hardware, Verilog, MIPS, FPGA, UART*   Oct 2021 - Dec 2021

· Outcome: Implemented a single-cycle CPU capable of supporting the base instruction set and accomplishes some scenario tasks.
· Assessment: Undertook 70% of the project of three people and got 110% score in the curriculum of Principle of Computer Organization.

HONORS & AWARDS

The Academic Recognition Award of Oxford Study Abroad Program (top 2%)	Aug.2022
The Second prize in Contemporary Undergraduate Mathematical Contest in Modeling (leader)	Sep.2022
The Second prize in National College Mathematics Competition	Nov.2022
The Grand prize in National Extracurricular Academic Science and Technology Works Competition	Mar.2023
The Third prize in National Undergraduate Basic Medical Innovation Research Experimental Design	Apr.2023
The National Encouragement Scholarship	Oct.2023
The Scholarship of the University for three years in a row (top 10%)	Oct.2021 - 2023
Merit Scholarship for Freshman Admission	Oct.2020

EXCHANGE & INTERNSHIP EXPERIENCE

Shenyang Sanyo Building Machinery Co., Ltd.	Jun.2022 - Aug.2022
Oxford - St. Anthony's College	Aug.2022 - Sept.2022
National University of Singapore - School of Computing	May.2023 - Jul.2023

TECHNICAL SKILLS

Programming Languages: Java, Python, C/C++, SQL, JavaScript, HTML/CSS, Verilog
Frameworks: Pytorch, SpringBoot, Vue, MyBatis, Hibernate, Node.js, JUnit
Developer Tools: IntelliJ, VS Code, GitHub, Jupyter Notebook, PyCharm, Tableau, MATLAB
Common System: MacOS, Ubuntu, Windows

EXTRACURRICULAR ACTIVITIES

Cadre of the Youth League Committee of SUSTech	Oct.2020 - 2022
Student Assistant in Shuli College of SUSTech	Oct.2021 - Jan.2023
Monitor of Department of Computer Science and Engineering	Sept.2022 - Present