Yunhan Wang

yunhan.wang@student.uni-tuebingen.de | Personal webpage

Education

University of Tübingen **Tübingen, Germany**
MSc Machine Learning *Expected Jul 2025*

- Specialize in 3D vision and machine learning.
- Courses: Virtual Humans, Human Motion Synthesis, Deep Learning.

Delft University of Technology **Delft, Netherlands**
BSc Computer Science and Engineering (Honours & Cum Laude) *Sep 2020 - Jul 2023*

- Cumulative GPA: 8.7 (top 5%).
- Minor in Mathematics & Finance: GPA 9.0.

Research Experience

Computer Vision Lab, TU Delft **Delft, Netherlands**
Undergraduate Researcher (honours programme); Advisor: Dr. Xucong Zhang. *May 2022 - Aug 2023*

- Researched multi-view Bayesian gaze estimation methods.
- Investigated vital factors that can boost gaze estimation performance. Developed state-of-the-art gaze estimation models in PyTorch.
- Contributed to GazeTech, an open-source gaze estimation framework.
- Research conducted in collaboration with Dr. Shalini De Mello from NVIDIA Research and Dr. Hyung Jin Chang from the University of Birmingham.

Thesis Researcher; Advisor: Dr. Jan van Gemert. *April-Aug 2023*

- Researched efficient temporal action localization via vision-language modeling.
- Subsequent research work has been accepted by the 2023 International Conference on Computer Vision (ICCV), Workshop on AI for Creative Video Editing and Understanding.

Work Experience

Scenwise **The Hague, Netherlands**
Software Data Engineering Intern *April-June 2022*

- Developed a backend framework to extract and geolocalize data from social media channels to analyze crowd behaviors using computer vision and natural language processing methods.
- Developed a crowd counting and object detection tool to analyze crowd behaviors from public camera recordings
- Utilized the system to reduce city managers' crowd-managing efforts on a city-wide scale and the costs associated with collecting data from government physical sensors.
- Tech stacks: GeoPy, GeoPandas, OpenCV, NumPy, Spring Boot, PostGIS, and Docker.

CS Department, TU Delft **Delft, Netherlands**
Teaching Assistant *Sep 2022 - Feb 2023*

- Assisted *Algorithms and Data Structures*, *Big Data Processing*, and *Capstone AI Project*.
- Supervised student groups in developing AI-centered research projects proposed by academic staff.
- Assisted lecturers with course development to promote a positive learning environment.
- Helped students retain course knowledge using personalized teaching methods.

Skills

Programming: Python, Java, Scala, SQL, C++, Unix, and R.

ML/3D stacks: PyTorch, NumPy, Scikit-learn, Pandas, OpenGL, OpenCV, and SMPL.

Mathematics: Stochastic Calculus and Processes, Monte Carlo methods, Numerical methods, and Time Series.

Publication

Investigation of Architectures and Receptive Fields for Appearance-based Gaze Estimation
Yunhan Wang, Xiangwei Shi, Shalini De Mello, Hyung Jin Chang, Xucong Zhang. Preprint, 2023.

Benchmarking Data Efficiency and Computational Efficiency of Temporal Action Localization Models
Jan Warchocki*, Teodor Oprescu*, **Yunhan Wang***, Alexandru Damacus, Paul Misterka, Robert-Jan Bruintjes, Attila Lengyel, Ombretta Strafforello, Jan van Gemert. International Conference on Computer Vision, Workshop on AI for Creative Video Editing and Understanding, 2023.

(* denotes equal contribution)