

Yuqing Huang



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OBJECTIVE

Candidate for Computer Science master's degree at ETH Zürich, majoring in Visual and Interactive Computing. My research interest focuses on developing computational methods for medical image analysis to aid diagnosis and treatment.

EDUCATION

ETH Zürich, Switzerland Master in Computer Science	Sept. 2022 — Aug. 2024 (Anticipated)
University of Waterloo, Canada Bachelor of Mathematics in Computer Science	Sept. 2018 — June 2022 GPA: 94.3%
Bachelor of Mathematics in Combinatorics & Optimization	GPA: 95.0%

EXPERIENCES

3D Brain Vessel Segmentation using Graph Neural Networks <i>Computer Vision Lab at ETH Zürich and University Hospital Zürich</i>	July 2023 — Oct. 2023 <i>Zürich, Switzerland</i>
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- Proposed a novel method of integrating Graph Attention Network to U-Net.
- Improved vessel segmentation accuracy and connectivity compared with U-Net on brain MRA dataset.
- Provided an open-source Python-based implementation of the framework.

Surgical-Planning HoloLens App <i>ETH Zürich and CustomSurg</i>	Feb. 2023 — June 2023 <i>Zürich, Switzerland</i>
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- Added new features for a HoloLens App used in bone fracture surgery planning.
- Performed 3D object detection and classification with HoloLens camera.

Computer Vision Research Assistant <i>University of Waterloo, supervised by Prof. Olga Veksler</i>	Sept. 2021 — Dec. 2021 <i>Waterloo, Canada</i>
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- Combined CNNs with discrete optimization techniques for semantic segmentation.

Database Management Research Assistant <i>University of Waterloo, supervised by Prof. Semih Salihoglu</i>	Jan. 2021 — Nov. 2021 <i>Waterloo, Canada</i>
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- Researched on developing efficient and accurate algorithms for querying graph-structured data.

PAPERS

1. **Yuqing Huang**. 3D Vessel Segmentation using Graph Neural Networks. (**Semester Thesis**)
2. Jeremy Chen, **Yuqing Huang**, Mushi Wang, Semih Salihoglu, Ken Salem. Accurate Summary-based Cardinality Estimation Through the Lens of Cardinality Estimation Graphs. (**VLDB 2022 Best Experiment, Analysis and Benchmark Paper, SIGMOD Research Highlight Award**)

IT-SKILLS

Python	★★★★★
C/C++	★★★★★
PyTorch/TensorFlow/OpenCV	★★★★★
R	★★★★☆
Java	★★★★☆
HTML/CSS/JavaScript	★★★★☆

LANGUAGES

English	Fluent
Chinese	Native
French	B2 Level
German	A1 Level

HONORS AND AWARDS

Pasupalak UG Scholarship for Women in Computer Science (\$1500)	2021
Undergraduate Research Fellowship (\$7500)	2021
Mathematics Undergraduate Research Award (\$4500)	2021
Faculty of Mathematics Global Scholarship (\$25000)	2019