

Linhao Meng

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Address: Eindhoven, the Netherlands

Research Interests

Data Visualization, Visual Analytics, Explainable AI, Human-Centered AI

Education

- 2020 – 2025 **Eindhoven University of Technology** – Eindhoven, the Netherlands
Ph.D. Candidate in Computer Science
- 2018 – 2020 **Zhejiang University** – Hangzhou, China
M.S.E. in Software Engineering
- 2014 – 2018 **Zhejiang University** – Hangzhou, China
B.S. in Geographic Information Science

Research Experience

- Apr. 2025 – Present **Visualization Cluster, Eindhoven University of Technology (TU/e)**
Mentor: Prof. Anna Vilanova
Contributing to the Horizon Europe project *SmartCHANGE*, focusing on visual analytics for counterfactual explanations in the healthcare domain.
- Sep. 2020 – Apr. 2025 **Visualization Cluster, Eindhoven University of Technology (TU/e)**
Mentor: Prof. Anna Vilanova
Designing and developing visual interactive tools to support ML practitioners in understanding machine learning data and models.
- May – Jun. 2024 **Oxford e-Research Centre, University of Oxford**
Mentor: Prof. Min Chen
Collaborated on the visual design and analysis of model pruning experiments.
- May – Aug. 2020 **Google Summer of Code Program**
Mentor: Prof. Chris Myers (University of Utah)
Integrated a sequence visualization plugin, aligned with the SBOL visual standard, into SynBioHub under the NRNB initiative.
- Feb. 2018 – Jun. 2020 **Visual Analytics and Intelligence Group, Zhejiang University (ZJU)**
Mentor: Prof. Wei Chen
Conducted research on visual analytics for federated learning, geospatial data, and digital humanities.
- Jul. – Sep. 2016 **Institute of Geographic Sciences and Natural Resources Research, CAS**
Mentor: Prof. Xiaomei Yang
Extracted road networks from high-resolution remote sensing images using the Snake model.

Industry Experience

- Aug. 2019 – Apr. 2020 **Cisco Systems (Software Engineer Intern)** – San Jose, United States
Mentor: Ashutosh Malegaonkar
Developed a visualization dashboard for project progress management in Cisco DevNet. Also contributed to AR-related prototype development.

Publications

- Under Review **LangLasso: Interactive Cluster Descriptions through LLM Explanation**
Raphael Buchmüller, Dennis Collaris, **Linhao Meng**, Angelos Chatzimpampas
- Under Review **Glyph-based Visualization with Highlighting for Analyzing Longitudinal Machine Learning Experiments**
Linhao Meng, Joyraj Chakraborty, Stef van den Elzen, Anna Vilanova, Min Chen
- 2025 **Towards Difficulty-Aware Analysis of Deep Neural Networks**
Linhao Meng, Stef van den Elzen, Anna Vilanova
IEEE VIS Short Paper 2025
- 2023 **Class-Constrained t-SNE: Combining Data Features and Class Probabilities**
Linhao Meng, Stef van den Elzen, Nicola Pezzotti, Anna Vilanova
IEEE Transactions on Visualization and Computer Graphics (VIS 2023)
- 2022 **ModelWise: Interactive Model Comparison for Model Diagnosis, Improvement and Selection**
Linhao Meng, Stef van den Elzen, Anna Vilanova
Computer Graphics Forum (EuroVis 2022)
- 2022 **Visual Reasoning for Uncertainty in Spatio-Temporal Events of Historical Figures**
Wei Zhang, Siwei Tan, Siming Chen, **Linhao Meng**, Tianye Zhang, Rongchen Zhu, Wei Chen
IEEE Transactions on Visualization and Computer Graphics
- 2021 **VADAF: Visualization for Abnormal Client Detection and Analysis in Federated Learning**
Linhao Meng, Yating Wei, Rusheng Pan, Shuyue Zhou, Jianwei Zhang, Wei Chen
ACM Transactions on Interactive Intelligent Systems (TiiS)
- 2021 **VisBOL2: Improving Web-Based Visualization for Synthetic Biology Designs**
Benjamin Hatch, **Linhao Meng**, Jeanet Mante, James A. McLaughlin, James Scott-Brown, Chris J. Myers
ACS Synthetic Biology
- 2021 **Bubble Storytelling with Automated Animation: A Brexit Hashtag Activism Case Study**
Noptanit Chotisarn, Junhua Lu, Libinzi Ma, Jingli Xu, **Linhao Meng**, Bingru Lin, Ying Xu, Xiaonan Luo, Wei Chen
Journal of Visualization
- 2018 **Visual Abstraction of Large-Scale Geospatial Origin-Destination Movement Data**
Zhiguang Zhou, **Linhao Meng**, Cheng Tang, Ying Zhao, Zhiyong Guo, Miaoxin Hu, Wei Chen
IEEE Transactions on Visualization and Computer Graphics (VAST 2018)

Talks & Activities

- May 2025 Visiting Scholar, Focus Period, Linköping University
- Oct. 2023 Full Paper Presentation, IEEE VIS 2023
- Jun. 2022 Full Paper Presentation, EuroVis 2022
- Apr. 2022 Poster Presentation, ICT Open 2022
- Jun. 2021 Student Volunteer, EuroVis 2021

Technical Skills

Programming Languages

Proficient: JavaScript, HTML, CSS

Familiar: Python, C++, SQL

Software & Tools

Frontend: D3, Svelte, Vue, Vuex, Pinia, React, Redux

Backend: FastAPI, Flask, MySQL, MongoDB

Other: Node.js, Git, TensorFlow, Adobe Photoshop, Illustrator, Unity, Camtasia

Languages

English (fluent), Chinese (native)

Honors and Scholarships

- 2019 Chinese National Scholarship
- 2019 Second Prize, AI Innovation Competition (Zhejiang University)
- 2016 Zhejiang Provincial Government Scholarship
- 2015 Third Prize, Zhejiang Provincial Undergraduate Physics Competition

Other Interests

Swimming, Hiking, Photography