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Zhenghao (Shawn) Li

Education

- 2023–Present **Doctor of Philosophy in Computer Science**, *The Pennsylvania State University*, State College, PA
- 2022–2023 **Master of Science in Computer Science**, *University of Southern California*, Los Angeles, CA
- 2017–2021 **Bachelor of Science in Computer Science**, *University of California, Irvine*, Irvine, CA

Research Interests

Deep Learning, Health Informatics, Time-Series Analysis, Internet of Things, Smart Wearable, Healthcare Technology

Publications

- 2026 **[Accepted]**, *Toward Scalable ASL Education: Egocentric Stereo Sensing with LLM Feedback for Error-Aware Learning*, CHI 2026
Authors: Yongxiang Cai*; **Zhenghao Li***; Taiting Lu; Yanjun Zhu; Yi-Shan Wu; Qingsen Zhang; Xuhai Xu; Zhanpeng Jin; Mahanth Gowda; Yincheng Jin
- 2025 **[Published]**, *FuSenseRing: An Open-Source Platform for Robust Cuffless Blood Pressure Monitoring via Multimodal Sensor Fusion and Temperature-Adaptive Attention*, UbiComp (IMWUT) 2025
Authors: **Zhenghao Li***; Taiting Lu*; Shengming Yuan; Jigar Gosalia; Christine Bowlus; David Nathan Proctor; James A. Pawelczyk; Yincheng Jin; Mahanth Gowda
- 2025 **[Published]**, *SignGlass: First-Person View Comprehensive and Generalizable ASL Translation Using Wearable Glass*, UIST 2025
Authors: Yongxiang Cai; Taiting Lu; **Zhenghao Li**; Hao Zhou; Kenneth DeHaan; Xuhai Xu; Mahanth Gowda; Yincheng Jin

Research Experience

- 2023–Present **Graduate Research Assistant**, *The Pennsylvania State University*, State College, PA
- Investigating novel machine learning models for human activity and healthcare applications using smart wearables and IoT sensor data.
 - Developing and evaluating algorithms for multi-modal sensor fusion to improve the accuracy and robustness of on-device intelligence.
 - Investigating novel computer vision and natural language processing methodologies for the continuous, real-time translation of American Sign Language (ASL).
 - Designing interactive learning frameworks that provide automated, LLM-driven feedback to assist users in ASL education.

- Summer 2025 **Graduate Researcher Intern**, *VivoMetria*, Greensburg, PA
- Investigated and validated novel deep learning architectures (e.g., LSTMs, Transformers) for non-invasive continuous glucose monitoring using near-infrared (NIR) spectroscopy signals.
 - Engineered spectral and temporal features from high-frequency time-series data to enhance model robustness and predictive accuracy for glucose forecasting.
 - Developed a prototype Android application for real-time data acquisition from a wearable NIR sensor via Bluetooth Low Energy (BLE).
 - Collaborated with hardware and software teams to successfully integrate the predictive algorithm into an end-to-end prototype system for feasibility studies.
- 2022–2023 **Student Research Assistant**, *USC Structural Health Monitoring Lab*, Los Angeles, CA
- Investigating deep learning algorithms for 3D crack detection in infrastructure using point cloud data.
 - Responsible for the collection, processing, and labeling of a large-scale point cloud image dataset.
- 2022–2023 **Student Research Assistant**, *USC iLab*, Los Angeles, CA
- Designed and implemented an interactive mapping tool to streamline data collection for vision-based robot navigation.
 - Optimized data processing pipelines, reducing data collection time for the autonomous navigation system by 20%.

Teaching Experience

- Spring 2025 **Lead Teaching Assistant**, *CMPEN/EE 362: Communication Networks*, *Pennsylvania State University*, State College, PA
- Served as the primary point of contact for a class of over 200 students, managing all course-related communications, announcements, and inquiries.
 - Led and coordinated a team of graders to ensure consistent, fair, and timely grading of all assignments and exams.
 - Hosted weekly office hours to provide direct academic support, clarifying complex networking concepts and assisting students with assignments.
 - Collaborated with the course instructor on curriculum logistics, assignment design, and academic integrity cases.

Technical Skills

Languages	Python, C/C++, SQL, Java, JavaScript
ML Frameworks	PyTorch, TensorFlow, Keras, Scikit-learn
Tools & Technologies	Git, Linux, AWS, Docker, MySQL, Flask, Node.js

Awards and Honors

- 2025 **Best Teaching Assistant**, *The Department of Computer Science and Engineering at PSU*