Peijie Chen

peijie.chen.auburn@gmail.com
chanfeechen.github.io/resume | Google Scholar

Professional Summary

Senior Machine Learning Engineer with a Ph.D. in Computer Science and Software Engineering. Own model design, training, and deployment for edge and cloud computer vision systems, and design end-to-end LiDAR processing for infrastructure inspection. Research background in explainable AI and multimodal learning.

Technical Focus

Computer vision: Object detection, classification, segmentation, LiDAR point-cloud fusion, geolocation, cable tracking, and 3D measurement.
ML delivery: Edge and cloud deployment, model distillation, quantization, transfer learning, latency and memory optimization, Amazon SageMaker.
Research: Explainable AI, multimodal learning, CLIP, saliency methods.

Engineering Experience

Noteworthy AI Inc May 2024–Present
Senior Machine Learning Engineer *Connecticut, US*

- Own the design, training, and deployment of detection models for edge devices and detection/classification models for cloud inference in infrastructure inspection.
- Apply model distillation, quantization, and transfer learning to support efficient deployment; optimize latency, memory usage, and scalability.
- Design and implement the full Gen5 LiDAR data-processing pipeline, from raw data and point-cloud fusion through detection-based geolocation and asset extraction to cable-span extraction and measurement.
- Combine detections with fused point clouds to geolocate assets and extract their point clouds; implement cable tracking to extract spans for measurement.

Noteworthy AI Inc Jan 2024–Apr 2024
Machine Learning Engineer Intern *Connecticut, US*

- Built and deployed production defect detection and segmentation pipelines using Amazon SageMaker for scalable cloud inference.

Noteworthy AI Inc Sep 2022–Dec 2022
Machine Learning Engineer Intern *Connecticut, US*

- Prototyped computer vision models and supported their transition from research to product.

Selected Research and Projects

First or co-first author of the papers listed below.

PEEB (Findings of NAACL, 2024): First-author research on explainable and editable part-based image classification using a language bottleneck. Code.

gScoreCAM (ACCV, 2022; oral): First-author research on visual attribution for CLIP. Code.

Chest X-ray analysis: Developed models using MIMIC-CXR; integrated CLIP and saliency methods to connect predicted findings with image evidence.

Education

Auburn University 2018–2024
Ph.D., Computer Science and Software Engineering *Auburn, AL*
Advisor: Prof. Anh Nguyen. Research: explainable AI, object detection, and multimodal learning.

Auburn University — M.S., Electrical Engineering 2015–2017

Shenzhen University — B.S., Telecommunication Engineering 2010–2014

Earlier Experience

BooJum Studio — Co-founder, 2017–2018. Applied computer vision to creative workflow automation.

Shenzhen Xun Fang Telecom (Huawei Subsidiary) — Software Engineering Intern, May–Sep 2014. Maintained and optimized 3G WCDMA network management systems.