Run Wang
runw@clemson.edu | +1 (518) 961-8733 | Clemson, SC | https://runwang123.github.io

EDUCATION

Clemson University **SC, USA**
Phd Student in Computer Science Aug. 2025 - Present
Concentration**: *3D Computer Vision and Trustworthy AI for Autonomous Vehicles***

Carnegie Mellon University **PA, USA**
Master of Science in Electrical and Computer Engineering - Applied Advanced Program Sep. 2021 - May 2023

Rensselaer Polytechnic Institute **NY, USA**
Bachelor of Science in Computer & Systems Engineering Sep. 2017 - May 2021

SKILLS

- **Programming:** C, C++, C#, Python (PyTorch), Java
- **Tools/Frameworks:** Docker, Kubernetes, Terraform, Hugging Face
- **Research Areas:** Deep Learning, 3D Computer Vision, AI Security, Autonomous Driving

PUBLICATIONS AND ACKNOWLEDGEMENTS

1. **R. Wang** et al., "Lightweight Detection of Abnormal Battery Drain Induced by Network Operations of Mobile Apps," manuscript under review.
2. S. Wu et al., "Exploiting Hybrid Energy Storage to Minimize the Carbon Footprint of AI Data Centers," manuscript under review.
3. **R. Wang** et al., "MAPP: Predictive UI View Pre-caching for Improving the Responsiveness of Mobile Apps," in *Proc. IEEE/ACM Int. Symp. Quality of Service (IWQoS)*, 2025.
4. W. Zhang et al., "Component Segmentation of Engineering Drawings Using Graph Convolutional Networks," Computers in Industry, vol. 147, Art. no. 103885, May 2023. [Acknowledgement]

RESEARCH EXPERIENCE

Graduate Research Assistant|Clemson University | Clemson, SC **Aug 2025 – Present**
- Design 3D Vision and Trustworthy AI for Autonomous Driving.

Graduate Research Associate|Ohio State University | Columbus, OH **May 2024 – Aug 2025**
- Design machine learning models and time series algorithms to improve the performance of mobile and edge devices.
- (One paper is accepted to IWQoS 2025, and two papers are under review)

Research Assistant | CERLAB @ Carnegie Mellon University | Pittsburgh, PA **May 2022 – May 2023**
- Developed methods to extract component-level information from engineering drawings.
- Tweaked **PSPNet**, **DeepLabV3+,** and **SketchGNN,** and achieved **84% (SketchGNN)** overall accuracy

Research Assistant | CyLab @ Carnegie Mellon University | Pittsburgh, PA **Jan. 2022 – May 2022**
- Collected 80+ Linux OS based Malware Samples and traced their dynamic system-level behaviors.
- Created an in-house database by selecting and extracting 14 behavior features.

Research Assistant | RPI-IBM Cognitive and Immersive Systems Lab | Troy, NY **Jan. 2020 – Dec. 2020**
- Collaborated with the team in CISL to implement a real-time gesture recognition system by using **C#** and **Python** based on the **Nuitrack SDK** and **Intel® Realsense™ d435** camera.
- Gathered more than 600 gesture samples from 8 students with different body shapes and extracted data of skeletons.

WORK EXPERIENCE

Application Developer -- Fullstack | Computer Packages. Inc | Rockville, MD **May 2023 - Apr. 2024**
- Assisted in the migration process from legacy systems to newer technologies while ensuring data integrity.
- Optimized **SQL Server** queries for better performance by utilizing stored procedures and query optimization techniques.

PROJECT EXPERIENCE

User Recommendation MicroService **Aug. 2022 – Dec. 2022**
(AWS EC2, MySQL, AWS ECR, Kubernetes, Docker, Java, Python, Vertx, Spark, Scala)
- Constructed a prototype by using **FastAPI** and **Vert.x** and benchmarked their performance.
- Developed an ETL pipeline by using **Spark Scala API** on **GCP Dataproc** to preprocess ~1TB Twitter dataset.
- Orchestrated the **AWS Cluster** and achieved 10000 RPS for the User recommendation service within a budget of 0.7$/hr.

WeCloudChat Service **Aug. 2022 – Sept. 2022**
(Azure ACR, Azure Front Door, GCR, GKE(Google Kubernetes Engine), Java, Kubernetes, Helm, HPA)
- Detected service lapses, rerouting traffic, and scaling using **HPA** (Horizontal Pod Autoscaler).
- Configured Azure Front Door for multi-cloud deployment routing.