Anthony Loh

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EDUCATION

Villanova University, College of Engineering **Expected: May 2027**
B.S. in Civil Engineering, Minor in Geography *Villanova, PA*

- **Award:** John Hennessy Undergraduate Research Fund, 1 of 8 competitive grants for independent research
- **Coursework:** Transportation Engineering; Remote Sensing; Land Use Planning & Management; CE Materials
- **In Progress**: CEE Capstone Design; Water Resources Engineering Design; Environmental Unit Operations

RESEARCH EXPERIENCE

Villanova University, Department of Civil & Environmental Engineering **Sep. 2026 to Present**
Undergraduate Researcher, 3D Campus Digital Twin *Villanova, PA*

- Directed an AI-assisted pipeline: a JSON spec per building builds the Blender model in 2 automated runs
- Built 34 campus buildings and 17 m USGS terrain in one site frame, FBX exports under 1 mm position error
- Delivered 2 prototype packages; faculty lead loaded the model into his traffic microsimulation software

Villanova University, Department of Civil & Environmental Engineering **Jan. 2026 to May 2026**
Undergraduate Researcher, Transportation Systems *Villanova, PA*

- Sole author of a funded study isolating the 2021 Texas grid collapse from COVID, finding a 20.4% travel drop
- Traced a 41.2-point gap between Austin (-36.3%) and El Paso (+4.9%), outside ERCOT, to grid not weather
- Identified 670 to 700 non-COVID excess deaths that week, 2.7 to 2.9× the official count, from testing collapse
- Extended into a three-author paper, now at the proof stage with Veritas: Villanova Research Journal (Vol. 8)
- Built an interactive 3D public web visualization of the study's spatial findings (https://alohresearch.pages.dev)

PROJECTS

NYC Crash Explorer, Traffic Safety Analysis **Fall 2026**

- Built a public map of 51,224 NYC injury and fatal crashes by hour and location (https://anthonyloh.pages.dev)
- Recovered 213 deaths a naive query dropped and ranked intersections by pedestrian and cyclist casualties

Transit Accessibility Mapping, SEPTA and NYC Subway **Summer 2026**

- Processed 2M+ records from public GTFS feeds and ridership data through a Python normalization pipeline
- Built a custom JavaScript layer visualizing access at each SEPTA and NYC Subway station on a public web map

Stormwater Wetland Assessment and ADA Path Redesign **Spring 2025**

- Evaluated a constructed stormwater wetland through storm chloride t-testing and cumulative probability plots
- Redesigned 722 ft of campus walkway to full ADA specs from total station surveys, holding slope under 8.33%

WORK EXPERIENCE

Information Technology Technician, Villanova University **Sep. 2026 to Present**

- Staff a support hotline diagnosing AV and software faults during live instruction, logged via ticketing system

Distance Education Operator, Villanova University **Sep. 2026 to Present**

- Operate audio/video systems for live remote graduate engineering courses, managing streaming and archiving

Classroom Organizer, Villanova University **Aug. 2025 to Present**

- Reset and inspect up to 30 classrooms across 7 academic buildings on a daily 7:00 AM shift, escalating faults

TECHNICAL SKILLS

- **Programming & Data:** Python (pandas, SciPy, scikit-learn, GeoPandas), JavaScript, HTML/CSS, R, Tableau
- **GIS & Engineering:** ArcGIS Pro, AutoCAD, Civil 3D, spatial analysis, remote sensing, GTFS data, surveying
- **Methods:** Quasi-experimental design, hypothesis testing, regression, RS Means estimation, site due diligence