

RYAN LI

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Civil Engineering student at UIUC seeking undergraduate internship opportunities in structural engineering. Interested in applying AutoCAD, engineering design, and problem-solving experience to projects involving buildings, bridges, and resilient infrastructure.

EDUCATION AND CERTIFICATION

University of Illinois Urbana-Champaign | Bachelor of Science, Civil Engineering (Structural Focus) Expected May 2030

Activities: Steel Bridge Team, Concrete Canoe, ASCE Chapter

Coursework: SE 101 (Revit, Engineering Graphics), CEE 190 (Project-Based CEE)

Bridgewater-Raritan High School

Sept 2022 – June 2026

Activities: Engineering, Yearbook, Theoretical Physics Club, Student Photographer

Cumulative WGPA: 4.60/4.00

Coursework: Calc III, Differential Equations, Linear Algebra, AP Physics C, AP Chem

TECHNICAL SKILLS

CAD/Software/Programming: AutoCAD, SketchUp, Revit, Microsoft Excel, Python, Manual Drafting

Certifications: OSHA 10-Hour Construction

Spoken Languages: English, Mandarin, Italian (Limited working proficiency)

RESEARCH & ENGINEERING EXPERIENCE

Undergraduate Researcher | University of Illinois Urbana-Champaign Aug 2026 – Present

- Prof. Jinhui Yan: Reviewing finite element analysis & computational materials/mechanics research for 3D-printing applications.
- Prof. Bassem Andrawes' Research Group: Lab work on shape memory alloys, rebar coating, and 3D-printed concrete trusses

Geotechnical Intern | New Jersey Institute of Technology

May – Aug 2024

- Performed Standard Proctor Compaction, density, and sieve analysis on multiple soil types to evaluate geotechnical properties
- Authored research abstract on slope stability (moisture content & soil gradation)
- Collected and analyzed experimental data before presenting findings at the NJIT Student Research Symposium

Job Shadow | LMW Engineering Group, Linden, NJ

Aug 2024

- Reviewed structural drawings for apartments and small buildings, practiced AutoCAD drafting, and discussed structural design workflows, Revit vs. AutoCAD, steel codes, and engineering career paths with practicing civil engineers.

PROJECT EXPERIENCE

Residential Beam Design – Structural Drawing Set

July 2026

- Developed a 23-page AutoCAD drawing set for an 18'-10" beam span, including plans, sections, details, and demolition plans.
- Performed beam sizing calculations in Excel using the Allowable Stress Design (ASD) method for Glulam and steel options.
- Built 3D SketchUp models to visualize framing layouts and connection details for both material alternatives.
- Conducted a cost comparison analysis between Glulam and steel, including materials, labor, and a 20% contingency buffer.

Popsicle Stick Bridge R&D

2021 – 2026

- Calculated theoretical load capacities using physics and linear algebra, then tested bridges to failure
- Analyzed results and iterated designs to improve truss configuration, force distribution, and material efficiency

2027 NJ Statewide HS GST Bridge Competition (In Progress)

Mar 2026 – Present

- Authored a 30-page rulebook from scratch, introducing a custom economy system where teams manage a \$1,500 simulated budget, encouraging tradeoffs between structural performance and cost efficiency, along with original 3D scoring graphs.
- Coordinating venue logistics with Princeton's ASCE co-presidents, and actively securing sponsorships & recruiting volunteers

Hands-On Construction Experience

2020 – June 2026

- Built 3 small structures (concrete foundations, wood framing, pitched roofs), a 10'x12' paver patio, and a drainage dam system
- Managed project budgets to lay 14'x22' ceramic tile flooring and a 12'x12' chicken run with SketchUp layout planning

LEADERSHIP & EVENTS

2026 NJ Statewide HS Integration Bee Competition | Event Host/Organizer

Jun 2025 – Apr 2026

- Founded and hosted a statewide calculus competition with 16 students, 20+ volunteers, and 3 university professors; coordinated logistics, sponsorships, outreach, and 100+ LaTeX-formatted competition problems.

Mu Alpha Theta Math Honors Society | Founder/President

Feb 2025 – Jun 2026

- Founded and grew club membership to 15–20 active participants; raised \$2,200+ through tutoring and fundraising initiatives.