

RYAN LI

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Incoming civil engineering student at UIUC seeking undergraduate research/internship opportunities in structural engineering. Interested in applying AutoCAD, engineering design, and problem-solving experience to research involving buildings, bridges, and resilient infrastructure.

EDUCATION AND CERTIFICATION

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

Anticipated Activities: Steel Bridge Team, ASCE Chapter, ACI Student Chapter, SEAOL Chapter

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

Bridgewater-Raritan High School June 2026

Activities: Mu Alpha Theta, Engineering & Theoretical Physics Club

Cumulative WPGA: 4.60/4.00

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

TECHNICAL SKILLS

CAD/Software/Programming: AutoCAD, SketchUp, Revit (Learning), Microsoft Excel, Python (basic), Manual Drafting

Certifications: OSHA 10-Hour Construction, MOS Excel Associate (In Progress)

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

RESEARCH & ENGINEERING EXPERIENCE

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 at Linden, NJ Aug 2024

- Reviewed structural drawings for apartments and small buildings to see how beam/column sizing comes together
- Spent time practicing AutoCAD drafting and reading through the steel code manual

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 involving 16 students, 20+ volunteers, and 3 university professors.
- Coordinated logistics, sponsorships, outreach, and competition materials, including 100+ LaTeX-formatted 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.