Conal Doyle

Elmhurst, IL | ConalDoyle05@outlook.com | www.linkedin.com/in/conal-doyle | conaldoyle.com
U.S. & Irish citizen · EU work authorization · Available June through mid-August 2027

EDUCATION

Purdue University - College of Engineering — **West Lafayette, IN**
B.S. Mechanical Engineering — **Dec 2028**
- Minor: Global Engineering Studies · Pharmaceutical Manufacturing Certificate · GPA: 3.67 · Lilly Scholars at Purdue · GEARE · ASME

Purdue University - Daniels School of Business — **West Lafayette, IN**
B.S. Economics — **Dec 2028**
- Minor: Mathematics · Purdue Hurling · University Blood Initiative

PROFESSIONAL EXPERIENCE

E.H. Wachs (ITW) — **Lincolnshire, IL**
Manufacturing Engineering Intern — **Apr 2026 - Aug 2026**
- Built a Python application generating standardized PowerPoint work instructions from Excel and images - with input validation, revision history, configurable PPE, and 2-/4-/8-step layouts - cutting creation time roughly 80-90% (about 6 hours to 1 hour on tested assemblies)
- Designed a manual torque stand in SolidWorks targeting ~30 ft-lb resistive torque with opposed tapered roller bearings, a serviceable steel shaft, and an 80/20 aluminum-extrusion frame; evaluated preload, materials, fasteners, and operator stability
- Developed a Python/Raspberry Pi production test station with ADC-based measurement, automated PASS/FAIL evaluation, label printing, and CSV traceability for assembly testing and failure investigation
- Designed and documented 12 assembly tools and documented 60+ assemblies totaling over 2,500 work-instruction steps, recording inconsistencies between engineering drawings and as-built assemblies
- Ran assembly time studies and production trials on the floor to evaluate workflow efficiency and support production-time reduction
- Resolved a revision-control gap by shipping a QR system that let operators keep their existing paper workflow while guaranteeing current-revision verification, keying URLs to assembly number so printed codes never expire and publishing 100+ live status pages via the GitHub REST API

Eli Lilly - Central TSMS Microbiology Innovation Lab — **Indianapolis, IN**
Sterility Assurance & Microbiology Intern — **Jan 2026 - Apr 2026**
- Developed four proof-of-concept protocols to evaluate an external partner's autonomous cleanroom environmental-monitoring robot for enterprise adoption; executed and analyzed the first three across seven trials
- Coordinated experiments with a co-intern, laboratory scientists, and vendors while applying sterility-assurance and environmental-monitoring practices
- Presented methods, results, and limitations to the inaugural Global Sterility Assurance Forum and demonstrated the robot directly to Lilly's manufacturing lead team

Erin Concrete / Doyle Builders — **Elmhurst, IL**
Part-Time General Laborer — **Aug 2019 - Present**
- Contributed to residential home construction from foundation through finish across multiple projects since 2019
- Handled material staging, site preparation and cleanup, and tool maintenance on active job sites

PROJECTS & RESEARCH

Purdue EPICS - Global Air Quality Trekkers (GAQT) — **West Lafayette, IN**
Nanofiber Research - Team Archivist to Team Lead — **Spring 2025 - Fall 2025**
- Advanced from team archivist to team lead, organizing research plans, member training, and experiment coordination
- Served as the only trained undergraduate qualified to independently operate the electrospinning equipment
- Expanded the nanofiber team from about 3 to 6 members and increased testing from 1-2 to 4-5 trials per week while documenting results and next steps

LEADERSHIP & INVOLVEMENT

Boy Scouts of America — **Elmhurst, IL**
Eagle Scout · Senior Patrol Leader — **Feb 2017 - Sep 2023**
- Earned Eagle Scout rank, building 40 flower planter boxes for the DuPage Senior Citizens Council during COVID-19; served as Senior Patrol Leader
- Inducted into the Order of the Arrow for demonstrating outstanding leadership, service, and dedication

Speak Anglos - Italy — **Trento, Italy**
Native English Speaker (Anglo) — **Jul 2024**
- Delivered a full-immersion English camp in Trento for approximately 40 engineering students from Bari, Italy
- Led daily English-language exercises, encouraging students in developing fluency in an international engineering setting
- Supported hands-on technical activities that reinforced English comprehension in an engineering context

University Blood Initiative at Purdue — **West Lafayette, IN**
Event Tabler · Frequent Donor — **Aug 2024 - Present**
- Promoted blood donation by tabling events, educating students, and encouraging participation
- Donate blood every 8-12 weeks, maintaining a consistent donation schedule

RELEVANT SKILLS

Design & CAD: SolidWorks, NX, Fusion 360, Onshape | **Programming & Test:** Python, MATLAB, Java, C, Raspberry Pi, data acquisition, Excel | **Manufacturing & Methods:** CNC machining, assembly tooling & fixtures, work-instruction standardization, technical documentation | **Languages:** Spanish (B1)