

Petros Sklavounos

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Education and Professional Certifications

The Cooper Union for the Advancement of Science and Art

BE Mechanical Engineering, *Cum Laude Honors Graduate*; Minor in Economics

ME Mechanical Engineering

FE Mechanical and OSHA 10 License

New York, NY

May 2024

December 2024

March 2024

Professional Experience

Department of Buildings, Boiler Division

Mechanical Engineering Intern and Panelist for Engineering forum

New York, NY
June 2022 – October 2023

- Performed 30+ mechanical room and elevator inspections to check compliance with NYC Codes
- Standardized boiler inspections and improved process efficiency and safety compliance through a new checklist that was subsequently adopted by 50+ inspectors and insurance firms
- Developed technical training resources and safety operating procedures for all agencies in close collaboration with the Assistant Commissioner and Agency Directors

KPMG Lower Gulf

IT Department Intern

Dubai, UAE

July 2019

- Implemented data conversion for entire client base in Microsoft Dynamics 365 Customer Relationship Management system. Cleansed 200+ records and eliminated duplicate entries

Leadership and Select Projects

Hemodialysis Needle Redesign

Project Lead Co-Author of ASME IMECE Paper (in review)

2023 – Present

- Engineered a novel hemodialysis needle that is 93% more flexible at body temperature and conforms to vasculature, thus reducing patient discomfort and vascular trauma
- Manufactured a thermo-responsive, polymer blend needle using CNC machining and injection molding. Conducted tensile and buckling tests and compared empirical data to Ansys simulations

The Cooper Union Hyperloop Team

President and Frames Subsystem Lead

2021 – Present

- Lead five subsystems and 20+ team members. Manage \$30,000 in university funding
- Achieved 43% mass reduction by replacing steel beams with aluminium cross-sections while maintaining the design parameters

Energy Efficiency Building Systems Project

Project Lead

November 2023

- Refined CO₂ monitoring in the classroom and achieved 12% removal through an optimized sensor placement using Solidworks Flow Simulation, Python-based data analytics, and BMS software

Machine Learning Projects

Developer

June 2023

- Created an elevator maintenance predictor from sensor data, reducing downtime by 30%
- Attained 98% email spam detection accuracy using text patterns and algorithms

Wind Tunnel Manufacturing Project

Project Lead

May 2023

- Conceived and managed a \$2,000 project to replicate a Cooper Union wind tunnel test section, cutting costs by 60% through in-house production and sourcing from alternative industrial equipment suppliers

Awards

- The Cooper Union Howard Silfin ME Internship Award (2023)
- The Duke of Edinburgh's International Award, Silver Standard (2018)

Skills

- Technical proficiency: AutoCAD; Solidworks; MatLab; LaTeX; Ansys; Altair Hypermesh; Machining
- Debating: World Scholar's Cup Gold Medalist at Yale University, Vietnam, and UAE (2016 – 2017)
- Languages: Greek (fluent); French (conversational)

Interests

- Juniors' coach and adults' golf caddie at Special Olympics World Games Abu Dhabi
- Junior Golf Champion, Dubai; handicap 9.0. Distinctions in junior tournaments (Greece, Cyprus, UAE)

Citizenship

- Dual European Union and United Kingdom