Matthew P. Pianka

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EDUCATION

Cornell University College of Engineering, Ithaca, NY August 2023 – May 2027
Pursuing a BSc. in Mechanical Engineer
Relevant courses: Introduction to Computer Science, Statics and Mechanics of Solids, Thermodynamics, Introduction to Special Relativity, Dynamics, Introduction to Mechanical Design
GPA: 3.71

LEADERSHIP & EXPERIENCE

CSalt Project Team, *Co-Founder and Mechanical Subteam Lead*, Cornell University August 2024 – Present
- Achieved the Best Technical Design at the U.S. D.O.E.'s Marine Energy Collegiate Competition (MECC)
- Directing a team in design, CAD modeling (Fusion 360), data analysis, and construction of a wave-powered desalination system
- Coordinating and facilitating weekly work sessions, general body, and E-Board meetings to ensure collaboration and progress
- Collaborating in weekly lab meetings on wave energy converters, gaining insight to enhance the device's design and functionality

DuPont, *Engineering Intern*, Marlborough MA May - August 2025
- Prevented $3+ million in damages through supporting the process chilled water loop cleaning by managing chemistry treatment, testing, and Building Management System updates to resolve contamination and flow issues
- Created and delegated 200+ work orders and preventative maintenance procedures across all departments to maintain smooth site operation and improve task efficiency
- Audited and updated 350+ equipment records in MaintainX and labeled units to improve maintenance efficiency & identification
- Collaborated with engineers & technicians in daily meetings to find data-driven solutions to abnormal system behaviors

CU Solar Boat Project Team, *Drivetrain & Steering Subteam Co-Lead*, Cornell University March 2024 – May 2025
- Utilized SolidWorks to redesign drivetrain components to reduce noise and enhance efficiency & performance at competition
- Customized propeller shaft using hub adapters to allow seamless propeller transitions for optimized performance in sprint, endurance, and slalom competitions
- Assembled, tested, and redesigned the drivetrain and steering system during multiple work sessions per week and engaged in weekly E-Board meetings, contributing to the team's overall readiness for competition
- Configured steering mechanism and integrated the drivetrain onto a solar-powered boat for participation, successfully preparing it for the annual Solar Splash competition

Solar Windows Coated with Yb-doped Perovskites, *Research Team Member,* Cornell University August - December 2023
- Designed an unobtrusive window that harnesses solar energy to power homes and analyzed the market for feasible applications
- Researched various methods of synthesizing thin-film perovskites
- Calculated energy efficiency of the solar window and estimated cost of installation

SKILLS AND HONORS

Programs & Skills: SolidWorks (Intermediate), Fusion 360 (Intermediate), MATLAB (Intermediate), Python (Intermediate), AutoCAD (Intermediate), Machine Shop (Lathe & Mill), Microsoft Office (Intermediate), Team Leadership, Project Management
Languages: Polish (Fluent), Spanish (Intermediate)
Massachusetts Seal of Biliteracy in Spanish, *June 2022*
Honors: Science National Honor Society, Mu Alpha Theta Honor Society