

Agnel Jensen A. Paul

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EDUCATION

University of Illinois at Urbana-Champaign (UIUC)

Master of Engineering (MEng) in Mechanical Engineering

Aug 2023 – Dec 2024

Coursework: Design for Six Sigma, Data Science in Manufacturing Quality Control, and Electronics Cooling

NMIMS University

Bachelor of Technology (BTech) in Mechanical Engineering

Jul 2018 – May 2023

Master of Business Administration (MBA) in Technology Management (dual degree)

Specialization: Operations and Supply Chain Management & Business Analytics

SKILLS

- **Tools:** ANSYS Icepak, AutoCAD, Siemens NX, Python, SQL, SolidWorks, Tableau, Fusion360, Minitab
- **Manufacturing:** CNC Machining, 3D Printing, FANUC Robots, GD&T, Technical Documentation, Design of Experiments (DoE), Design for Manufacturing & Assembly (DfMA), Process Capability Analysis, Tooling Design, Lean Manufacturing, Six Sigma (6S), Root Cause & Corrective Action (RCCA), Process Mapping
- **Certification:** Professional Certificate in Electric Cars – TU Delft Online
- **Spoken Languages:** Fluent in English; Business Intermediate in German (A2)

WORK EXPERIENCE

Micro-Nano Mechanical Systems Cleanroom Laboratory

Urbana, IL

Mechanical Engineering Student Assistant

Jan 2024 – May 2024

- Enhanced wafer prototype operational efficiency through new manufacturing input and output parameters.
- Assisted integrating \$35,000 High-NA Photolithography equipment into the lab.
- Designed ergonomic layouts for improved productivity.
- Developed SOPs and utilized Minitab for SPC and DoE analyses, reducing process variability by 20%
- Improved wafer yield by 3% through rigorous qualification and validation activities.

STEM Workshop Instructor

Champaign, IL

Independent Volunteering Initiative

Aug 2021 – Present

- Delivered engaging 3D printing and robotics workshops for students.
- Led a team of eight to conduct STEM workshops for 500+ students in collaboration for the Teach for All initiative.
- Assisted UIUC's MechSE department with a two-week additive engineering outreach workshop program, inspiring 50+ high school students to pursue Mechanical Engineering.

The Aviation & Automobile Blogger – Technical Media Startup

Remote

Founder

Jan 2019 – May 2023

- Managed a team of five to produce technical content, generating \$5,000+ in revenue through partnerships.
- Authored 50+ technical articles and collaborated with Lufthansa Technik and BMW to enhance platform visibility.
- Supervised project timelines and content schedules with Kanban Boards to meet strategic business objectives.

PROJECTS & PUBLICATIONS

GreenFleetTech – Retrofittable Biomimetic Shark Skin for Semi-Truck Efficiency Improvement

- Developed a bionic film for drag reduction, with a future application of increasing semi-truck efficiency.
- Validated designs through CFD simulations and Python-based testing to ensure scalability for electric trucks.

2020 Boeing's National Aeromodelling Competition

- Ranked Top 3 nationwide by leading a team of four to engineer aircraft prototypes with 25 lbs payload capacity.
- Reduced build time by 20% through DFMA principles and performed on-spot design refinements.

Research Publication: A Challenging Future of Industry 4.0—New Technologies and Lean Production Systems

- Co-authored research on integrating Industry 4.0 and Lean Manufacturing methodologies, published in Springer Nature Singapore, March 2023.

DOI: 10.1007/978-981-19-7971-2_5

Digital Twin Model of a Custom Single-Phase Cooling Heat-Sink for Server CPUs

- Developed a Digital Twin Model of AMD EPYC CPU & a custom single-phase cooling heat sink using Fusion360.
- Simulated cooling behavior using ANSYS Icepak with real-time data, improving cooling efficiency by 12%.