RIPAN NURPAUJAN

081384331797 | fauzanivan21@gmail.com | www.linkedin.com/in/ripannurpaujan
Tasikmalaya, Indonesia

Fresh graduate with a Bachelor's degree in Mechanical Engineering from Universitas Muhammadiyah Yogyakarta, with research experience in nanofiber membranes for heavy metal separation. Possesses strong analytical and critical thinking skills, with a solid foundation in basic science and engineering. Committed to developing expertise in energy, CAD, and material engineering, and highly motivated to contribute to projects focused on innovation and sustainability.

Experience

Mechanical Engineering Laboratory, Universitas Muhammadiyah Yogyakarta - **Yogyakarta, Indonesia** — Feb 2023 - Jul 2023

Laboratory Assistant

- Monitored, evaluated, and assessed 25 students to ensure at least 70% mastery of practical material.
- Coordinated with supervising lecturer to achieve a 100% completion rate of the practicum.

Teknik Mesin Universitas Muhammadiyah Yogyakarta - **Yogyakarta, Indonesia** — Feb 2023 - Jul 2023

Team Leader Mini Project Numerical Methods

- Developed Python programs to solve quadratic and linear equation systems (Bracketing, Naïve Gauss, Gauss- Jordan), ensuring accuracy through debugging and test verification.
- Optimized code for efficiency and readability, facilitating smooth collaboration within the team.
- Led team coordination, project reporting, and final presentation, highlighting methodology, analysis, and troubleshooting.

Teknik Mesin Universitas Muhammadiyah Yogyakarta - **Yogyakarta, Indonesia** — Sep 2023 - Jan 2024

Team Leader Mini Project Machine Learning

- Developed and compared multiple Machine Learning models for car price prediction (Decision Tree, Gradient Boosting Regressor, Linear Regression), with Decision Tree achieving best performance ($R^2 = 0.94$).
- Performed data preprocessing, feature engineering, and hyperparameter tuning to improve model accuracy and robustness.
- Delivered project report and presentation highlighting methodology, model evaluation (MAE, MSE, R^2), and troubleshooting process.

PT Cadfem Simulation Technology Indonesia - **Jakarta, Indonesia** — Feb 2024 - Jul 2024

Participant Studi Independen Carbon Capture Simulation

- Simulated carbon capture process using ANSYS, modeling gas flow and CO□ absorption efficiency.
- Enhanced numerical analysis skills and applied engineering software for technical projects.
- Prepared simulation report to support process evaluation and recommendations.

Laboratorium Manufaktur S-1 Teknik Mesin UMY - **Yogyakarta, Indonesia** — Sep 2024 - Jan 2025

Capstone Project Participant - Hospital Bed Manufacturing

- Contributed to mechanical design, material selection, and manufacturing.
- Developed a prototype capable of supporting ~150 kg load.
- Prepared project management files, including timeline, progress documentation, and final report.

Laboratorium Nanomaterial S-1 Teknik Mesin UMY - **Yogyakarta, Indonesia** — Dec 2024 - Jul 2025

Final Year Project Researcher

- Developed and characterized BN-PVC/PEG nanofiber membranes for heavy metal removal from groundwater.
- Achieved 39% Fe removal efficiency in preliminary filtration tests.
- Optimized membrane solution composition to reduce droplet formation during electrospinning.
- Conducted contact angle, tensile strength, SEM-EDX morphology, and filtration performance tests.

Education

Universitas Muhammadiyah Yogyakarta - **Yogyakarta, Indonesia** — Sep 2021 - Aug 2025

Bachelor of Mechanical Engineering, 3.84/4.00

- UMY General Scholarship Recipient – 2022 & 2024
- BSI Scholarship Recipient – 2023
- Top 3 GPA in Mechanical Engineering Program, UMY – 2021 (GPA 3.95)

Organizational Experience

Himpunan Mahasiswa Mesin UMY - **Yogyakarta, Indonesia** Nov 2023 - Jul 2024

Division Secretary of Research and Technology

- Managed division administration and scheduling, while coordinating effectively with the division head.
- Initiated and facilitated a PKM seminar to encourage student participation in academic competitions, resulting in 10 registered ideas at the faculty level.
- Initiated and mentored the ONMIPA preparation program, successfully engaging and motivating 8 Mechanical Engineering students to join academic competitions.
- Supported the smooth execution of division activities through coordination and teamwork.

Skills, Achievments, and Other Experience

- **Hard Skills** : English, Mechanical Design (Solidwork and Inventor), Simulation Engineering (ANSYS Workbench - CFD and FEA) , Meterial Selection and Testing, Project Management, and Troubleshooting
- **Soft Skills**: Problem Solving and Critical Thinking, Attention to Detail, Communication and Presentation, Time Management, Teamwork and Collaboration, Creativity and Inovation
- **Certification** (2022): Certified SolidWorks Associate (CSWA) - Mechanical Design
- **Certification** (2022): Python for Data Science Certification
- **Certification** (2024): Ansys Associate Certification: Basics of Fluid Dynamics
- **Certification** (2024): Certified General Occupational Safety and Health Expert (Ahli K3 Umum)