



# DESKA RIZKI PRATAMA

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Chemical Engineering graduate from Universitas Sumatera Utara with internship experience in industrial process analysis. Possesses strong organizational skills gained from role as a Laboratory Coordinator, focusing on team coordination and safety compliance. Disciplined, adaptable, and eager to launch a career in Production, Process Engineering, or Quality Control.

## Education

- Universitas Sumatera Utara** - Medan, Indonesia Aug 2020 - Dec 2025  
**Bachelor of Engineering in Chemical Engineering (GPA 3.38/4.00)**
- Actively participated in national-scale collaborative research projects.
  - Served as a Bioprocess Laboratory Assistant to support academic activities.
  - Contributed to university and faculty-level student organizations.

- Universitas Sumatera Utara** - Medan, Indonesia  
**Final Year Project (Plant Design) Preliminary Plant Design of Methyl Methacrylate (50,000 Tons/Year)**
- Designed a chemical plant to produce Methyl Methacrylate via Direct Oxidative Esterification process using Au<sub>25</sub>/Zn<sub>2al</sub>-400 catalyst.
  - Performed Mass & Energy Balance calculations and equipment sizing for key equipment (Reactors, Distillation Columns) using Aspen HYSYS.
  - Conducted economic feasibility analysis (IRR, ROI, BEP) to ensure project profitability.

## Work Experience

- Part-time Staff | Waste Management** Feb 2025 – May 2025  
*USU Circularity Center, Universitas Sumatera Utara*
- Managed waste sorting and processing at the waste treatment unit, including processing plastic waste for pyrolysis and organic waste for composting.
  - Processed food waste into maggot feed and participated in maggot cultivation to support sustainable organic waste reduction programs.

- Laboratory Assistant Coordinator** Mar 2023 – Mar 2025  
*Bioprocess Laboratory, FT-Universitas Sumatera Utara*
- Guided and directed students in conducting bioprocess practicums systematically.
  - Developed and evaluated practicum modules to improve understanding of bioprocess science concepts.

- Volunteer Mentor PKM** Feb 2024  
*Direktorat Prestasi Mahasiswa dan Hubungan Kealumnian USU*
- Provided technical guidance and strategies to students in drafting Student Creativity Program (PKM) proposals.
  - Assessed and provided constructive feedback to improve the quality of student proposals.

- Polling Station Officer (KPPS)** Jan 2024 – Feb 2024  
*Komisi Pemilihan Umum (KPU), Langkat*
- Organized the voting process, from preparation to results reporting.
  - Ensured election procedures were carried out according to standards with high accuracy.

## **Process Engineering Intern**

*PT. Pacific Medan Industri, Deli Serdang*

Dec 2023 – Jan 2024

- Conducted analysis on live steam requirements for the Deodorizer unit.
- Calculated fuel consumption requirements for the High-Pressure Boiler (HPB) at the Refinery Plant..

## **Organizational Experience**

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### **Fundraising Division Member**

*Covalent Study Group (CSG FT-USU)*

Aug 2022 – Aug 2023

- Designed and executed fundraising strategies to support organizational activities.
- Managed resources and financial administration with high accountability.

### **Head of Religion and Education Department**

*Himpunan Mahasiswa Langkat (HIMALA USU)*

Jul 2022 – Jul 2023

- Initiated educational coaching and spiritual development programs for organization members.
- Acted as a liaison between the organization and local educational communities.

## **Publications**

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- Pratama, D. R., Berutu, A. S., Husin, F., & Panjaitan, M. Y. (2025). Innovation of Edible Coating of Mango Fruit Based on Shrimp Shell Chitosan with Tamarind Leaf Extract Additive as Antimicrobial. *Jurnal Teknik Kimia USU*, 14(1), 53-61. <https://doi.org/10.32734/jtk.v14i1.19093>

## **Skills & Achievements**

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- **Skills**
  - *Technical* : Microsoft Office, Canva, Adobe Illustrator, Google Workspace, Research Data Management, Scientific Writing.
  - *Interpersonal*: Effective Communication, Team Leadership, Cross-Division Collaboration.
- **Achievements**
  - PKM-RE Funding Awardee (2024)  
Student Creativity Program in Exact Research by the Ministry of Education, Culture, Research, and Technology.
  - PKM-AI Incentive Awardee (2024)  
Student Creativity Program in Exact Research by the Ministry of Education, Culture, Research, and Technology.
  - PKM-RE Funding Awardee (2023)  
Student Creativity Program in Exact Research by the Ministry of Education, Culture, Research, and Technology.

## **Hobbies & Interests**

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Sports (Badminton, Jogging), Reading Self-Development Books, and Graphic Design Exploration.