2 templates for no prior work and some work

Template 1: New Area (No prior direct work)

Subject: Prospective MS/PhD Student – Mechanical Engineering | GPA 3.61/4.0, IELTS 7.5

Dear Prof. [Last Name],

I am Minhaj Qureshi, a final year Mechanical Engineering student. I am writing this email to explore the opportunity of working under your guidance as a graduate research student beginning fall 2026.

Your work on [Project Name] intrigued me. Although I do not have direct experience with [particular field], I have been working with [related interests] for the last couple of years.

With experience in load bearing structures such as engine bed of a jet, designing and fabrication of overhead cranes as trainee at Modern Engineering Consolidated and exposure to rotary equipment such as pumps and compressors as an intern at Enar Petroleum Refinery, I believe I can play a part directly in your lab.

Some notable highlights of my profile:

- CGPA 3.61/4.0; **Prime Minister's Laptop Award** (top 1% nationally)
- ASME Petroleum Division Scholarship: For exceptional scholastic ability, leadership, and contributions to the mechanical engineering community.
- **Final Year Project**: Structural Validation of Engine Test Bed Model Considering Ceiling Mounted Loads as Benchmark (Pakistan Air Force)
- **Vice Chairperson (ASME-NED)**: Leading a 150+ members student section, organizing industrial visits and workshops of engineering.
- **Volunteered at the International Mechanical Engineering Conference** and assisted researchers with their presentations.
- **Aerospace Intern (Pakistan International Airlines)**
- **Trainee Design Engineer (Modern Engineering Consolidated)**
- **Mechanical Maintenance Intern (Enar Petroleum Refinery)**
- IELTS **7.5 (CEFR C1)**

I would be grateful to know if there are opportunities for graduate students (Master's or PhD) in your lab and would be happy to discuss potential research alignment at your convenience. Please find my documents including cv and transcript attached for your review.

Best Regards,

Minhaj Qureshi

Template 2: Direct Overlap (Already worked in this area)

Subject: Prospective MS/PhD Student – AI & Cloud Systems | GPA 3.61, IELTS 7.5

Dear Prof. [Last Name],

Your group's work on **[specific project/paper]** strongly resonated with me, as I have worked on related problems during my **Structural Validation of RD-93 Engine Test Bed project**, where I used the knowledge of fluid dynamics, engineering mechanics and vibrational analysis to design an engine test cell. I was particularly drawn to your approach to **[method/problem]**, which closely aligns with the direction of my own work.

I am Minhaj Qureshi, a final-year Mechanical Engineering undergraduate student. With experience in mechanics of materials and proficiency in modelling, multiphysics and structural analysis, I believe I can learn from your expertise and contribute to your lab in building more devices related to flexible electronics. I believe I can contribute meaningfully to your research in **[professor's area, e.g., secure and scalable cloud systems]**.

Some notable highlights of my profile:

- CGPA 3.61/4.0;
- **Prime Minister's Laptop Award** (top 1% nationally)
- ASME Petroleum Division Scholarship: For exceptional scholastic ability, leadership, and contributions to the mechanical engineering community.
- **Final Year Project**: Structural Validation of Engine Test Bed Model Considering Ceiling Mounted Loads as Benchmark (Pakistan Air Force)
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- **Aerospace Intern (Pakistan International Airlines)**
- **Trainee Design Engineer (Modern Engineering Consolidated)**
- **Mechanical Maintenance Intern (Enar Petroleum Refinery)**
- IELTS **7.5 (CEFR C1)**

I would be grateful to know if there are opportunities for graduate students (Master's or PhD) in your lab and would be happy to discuss potential research alignment at your convenience. Please find my CV and transcript attached for your review.

Best regards,
Minhaj Qureshi

Full experience

Dear Professor Adrián,

I am Minhaj Qureshi, a final year mechanical engineering undergraduate with a CGPA of 3.61/4. I write this email to explore the opportunity of research with you at California Institute of Technology beginning fall 2026.

Your research paper on **Machine-learning wall-model large-eddy simulation accounting for isotropic roughness under local equilibrium** really intrigued me. I have been working in the domain of Finite Element Analysis for the last one year. In addition, my final year project also includes **Structural validation of the RD-93 jet engine test bed** through FEM, which includes structural analysis, modal analysis and topology optimization on ANSYS. I find your work on material behavior and how you use experiments to confirm the results really fascinating, and through my knowledge in the field of mechanics of materials and proficiency in modelling, multiphysics and structural analysis, I believe I can contribute to your lab to enhance the design of the mechanical devices.

Some notable highlights of my profile:

- Recipient of the Prime Minister's Laptop Award for outstanding GPA performance nationwide (Top 2% nationally).
- ASME Petroleum Division Scholarship - Internationally awarded to students with exceptional grades and leadership shown in the student section.
- Vice Chairperson(ASME): Leading a 150+ members student section at my university.

I am really interested in studying the behavior of materials and would appreciate the chance to have a zoom meeting with you briefly to explore this further. You can see my CV and transcript.

Best regards,

Tab 3

Dear Professor Adrián,

I am Minhaj Qureshi, a final year mechanical engineering undergraduate with a CGPA of 3.61/4. I write this email to explore the opportunity of research with you at California Institute of Technology beginning fall 2026.

Your paper on **machine-learning wall-model large-eddy simulation for isotropic roughness under local equilibrium** really intrigued me. I found it fascinating how you used machine learning to characterize roughness independent of surface geometry.

During a project involving an engine test bed, I ran CFD simulations multiple times and noticed inaccuracies in the results. Reading your work helped me understand how flow behavior over rough surfaces can be better modeled. It also gave me a new perspective on improving my own simulations.

I would love the opportunity to contribute to your research in the future, especially through my growing experience in CFD.

Some notable highlights of my profile:

- Recipient of the Prime Minister's Laptop Award for outstanding GPA performance nationwide (Top 2% nationally).
- ASME Petroleum Division Scholarship - Internationally awarded to students with exceptional grades and leadership shown in the student section.
- Vice Chairperson(ASME): Leading a 150+ members student section at my university.

You can see my CV and transcript.

Best regards,