College of Engineering Graduate Student Cover Letter Guide

A cover letter is a one page overview of your relevant skills, experiences, and education to support your candidacy for a specific position. In some instances a cover letter will be a job application requirement, while in others, it will be optional. This guide provides information on developing cover letter content and formatting and includes a self-review checklist and sample cover letters to assist you in writing your cover letter.

Focus your Cover Letter on:

1. Connecting your past, present and future:
Your cover letter should show how your past experiences (education, internships, research, etc.) make you a unique candidate in the present, and how the qualifications gained from these experiences will be an asset when you apply them to projects at your target company in the future. In particular, you should explain the advantages of your experiences: the unique approach of CMU's programs and the qualifications and training the degree and/or your research has equipped you with and the qualifications you have gained from additional experiences (internships, leadership, work experience, etc.)

2. Highlighting the qualifications that your experience gave you – not the experience itself:
Your cover letter should NOT simply restate your résumé but should elaborate on the qualifications that your abilities, accomplishments, and experiences gave you as they relate to the specific position and company to which you are applying. You should carefully review the job description and ensure the skills and qualifications that you have included in your cover letter align with what the company is asking for in the job posting.

For Example:
BEFORE: I graduated with a Masters in Chemical Engineering from Carnegie Mellon University. This past year, I was a research assistant with Dr. XXX and I worked alongside other chemical engineers to ensure we completed our project by the deadline.
> ***What's wrong with this?*** It doesn't state what the applicant gained from the experience.

AFTER: My research in the Chemical Engineering department at Carnegie Mellon University has been focused on migration of electrolytic components through separator membranes. As a research assistant with Dr. XXX, I worked towards the device implementation of semiconducting conjugated polymers and acquired integrated technical judgment and a background in modeling from first principles. Through my research assistantship I have been prepared to provide materials expertise to Sandia National Laboratories' customers and sponsors.
> ***Why is this better?*** It states the qualifications gained from experiences AND links those qualifications to the future/position.

Tailor your information:

1. Be as specific as possible when introducing your abilities and qualifications; explain why:
You do not want the ideas in your cover letter to be general or vague. Try to eliminate sentences that could be written by anybody with a graduate degree in your field. Specific details make you look qualified, interested, and well-informed.

2. **Unify each body paragraph of your cover letter around one qualification, including the experiences that have given you this qualification:**
In particular, the first or second sentence of the paragraph should emphasize one or two specific qualifications afforded by the unique training of your degree and/or work and internship experience. The rest of the paragraph should provide specific details that support this main idea. These details should distinguish you from other applicants who also have a Master's degree in your field.

BASIC TEMPLATE

Name
Phone Number
Email Address
Optional: LinkedIn Profile URL|portfolio address|personal website address

Date

Company Name
Company Address

Salutation *(such as: Dear Recruitment Team)*

Introductory Paragraph:
- Introduce who you are and the position to which you've applied.
- Introduce how you heard of position, if through networking, faculty contact, or at a job fair.
- State your degree, major, college affiliation and graduation date.
- In the closing sentence, make a strong claim about your candidacy that states 1-3 qualifications you will discuss and provide evidence of in the body paragraphs of your letter- Ensure the qualifications listed directly correlate to the job description for the position to which you have written the letter.

Body Paragraphs:
- Write two to three body paragraphs. Each paragraph should focus on a specific qualification mentioned in the closing sentence of your introductory paragraph.
    - Demonstrate how your past experience, current skills, and education make you a fit for the opportunity.
    - Highlight your CMU experience and specialized training and skills you're developing in your program and/or through your research.
    - Elaborate on the most relevant skills and experiences (education, research, and professional work/intern experience) found in your résumé and connect them to the job qualifications versus simply restating your résumé.
    - Present information specific to you versus using general language that could have been written by any candidate in your program.

Concluding Paragraph:
- Restate why you're a strong candidate for the position.
- Reference any documents you've attached or enclosed (if sent via email).
- State your interest in interviewing or moving forward in the hiring process.
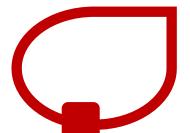- Thank your reader.

Closing salutation,
Your Name

COVER LETTER SELF-REVIEW

GENERAL

- ☐ Entire document uses one inch margins
- ☐ The top of the page includes your contact information, followed by the date, and employer's name and address
- ☐ Salutation is formal: Using the hiring manager's name if known OR a general salutation such as Dear Hiring Manager or Dear Recruitment Team
- ☐ Total document is One Page or less
- ☐ Paragraphs are short, concise and direct
- ☐ Cover Letter is free of grammatical and spelling errors

INTRODUCTION

- ☐ Names the position for which you are applying
- ☐ States your degree, major, college affiliation and graduation date
- ☐ Last sentence makes a strong claim about your candidacy that previews 1-3 qualifications you discuss in the body paragraphs
- ☐ Qualifications listed directly correlate to the job description for the position to which you have written the letter

BODY PARAGRAPHS

- ☐ The 1-3 qualifications highlighted in the introduction align to the body paragraphs topics, with themes clearly identifiable in the paragraphs
- ☐ Qualifications or skills gained from experiences are presented, not just the experiences themselves
- ☐ Paragraphs focus on connecting your past and present skills, qualifications and education to the company and/or position (i.e. your future)
- ☐ Specifics details and/or examples are provided and generalities are avoided
- ☐ Does not simply restate or summarize the résumé
- ☐ Strong action verbs and direct language are used

CONCLUSION

- ☐ Reminds the reader why you are a strong match for the position and references the key qualifications you highlight in the introduction and body paragraphs
- ☐ Includes a call to action—requests an interview, refers to future contact, etc.
- ☐ Mentions the other document(s) you are enclosing and/or the document(s) you are submitting as part of your application (as appropriate)
- ☐ Thanks the reader

Anna Gear

annagear@andrew.cmu.edu
(412)-555-1234

September 30, 2019

Awesome Engineering Co,
5678 Main Street
Pittsburgh, PA 15213

Dear Recruiting Manager,

I am writing to apply for the R & D Engineer position, which was shared with me by Bob Smith at the Technical Opportunities Conference 2019 at Carnegie Mellon University (CMU). Currently, I am pursuing a Master's degree in Mechanical Engineering at CMU with an expected completion date of May 2020. I believe that my professional experience in the field of Mechanical Engineering, specifically in mechanical product design and development, coupled with the research I am currently conducting at CMU have provided me with the product design, collaboration and project management skills needed to solve advanced engineering problems and be successful in this role.

Prior to CMU, I spent two years working on product research and development at National Engineering, Inc., where I contributed to the area of advanced product technology development and collaborated with a team of experts in the field of Mechanical Engineering. As part of the research team, I designed and developed two new one way clutch technologies for the two wheeler industry. I also served as the lead engineer in the design and development of a new seal mechanism which provides zero grease leakage and a longer running life. In addition to leadership roles, I collaborated with NEI's product design team on two projects, improving thrust load carrying capacity for a ball bearing and large radial-axial load carrying bearing design, that have been submitted for patents at the Indian Patent Office. This practical experience in mechanical engineering design and development, as well as working with a collaborative team, has given me the skillset to excel in this role.

My past professional experience and master's research project are similar to the position you are offering: each involves finding the root cause of a problem, mapping a plan to tackle the problem and designing the mechanisms that can solve it in a cost effective and efficient manner. My master's research project at CMU is directed towards the design and development of Fall Aid Health Care devices, where I am leading the project and product design process to create a novel device and solve a real world problem. I have a proven track record in the field of product design and development and I believe I can make a positive impact in solving complex engineering problems as well as driving innovative results.

I have always enjoyed research and creative problem solving and I believe that my experience will be of value in this role. If given the opportunity, I know I will be a strong asset to your company. Thank you for your time and consideration and I hope to hear from you soon.

Best Regards,
Anna Gear

Qualifications highlighted should align to the job description

Paragraph themes/emphasis should align to key qualifications from the introduction paragraph

Anna Gear
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andrewid@andrew.cmu.edu

March 15, 2019

A Machine Learning Company
101 Data Way, Pittsburgh, PA

Dear Recruitment Team,

I am writing to apply to the position of Research Engineer, Scientist at DeepMind which I found through the 2019 Spring EncompassCMU Career Fair at Carnegie Mellon University (CMU). I am pursuing a Master's Degree in Electrical and Computer Engineering from CMU and am graduating in May 2020. I believe I will be a good fit for this position due to my experience in Machine Learning (ML) and data analysis from my previous internships, research and projects.

Both my senior project from my undergraduate studies and my master's research project demonstrate my wide knowledge of ML methods and application of them. In my senior project, which I worked on in a team of three, we used a total of five different ML methods including K-nearest neighbors (KNN), Support Vector Machine (SVM), Random Forests, Logistic Regression and a Convolutional Neural Net (CNN) to understand what model would work best for the problem of trash classification. I implemented the KNN, the SVM, and the CNN model in Python on a Raspberry Pi using the Tensorflow and Keras libraries. In addition, during my ongoing Master's research, I am using ML techniques such as recurrent neural network (RNN) on a Raspberry Pi to detect Sleep Interruption in real-time. I am also working in Python using Tensorflow, Keras, NumPy, Pandas, SciPy and Librosa. These experiences developing ML methods in Python on real-time systems as well as the 5 courses in AI that I have taken at CMU will allow me to excel in this role.

In addition to my experiences in ML, I have worked with noisy, large datasets in my previous two internships. At BIG Engineering, I worked on benchmarking their AI engine's performance in clustering similar bugs in a bug database by developing a comparable solution and then actually comparing the two with data. This meant that I was dealing with a huge volume of extremely messy, confusing bugs. I used concurrent data processing techniques in Python to clean or regularize the dataset before clustering. During my internship at Biomedical Co., I built a custom compressor and decompressor in C and Python for the kinematic data flowing from a specialized surgical robotic devise. The robot had a large amount of kinematic data being sampled at very fast rates and involved careful design to ensure the network and message queues were not flooded while compression was occurring. These experiences have made me very comfortable designing optimized software for large datasets, and make me confident in the data capabilities I would bring to this position and your organization.

I have always been very passionate about Machine Learning and I would be very interested in a research position related to this field. I believe that my past experiences from my internships, projects and research in Machine Learning, datasets and Python make me a great fit for this position. I appreciate being considered for this role and I hope to hear back from you soon.

Best,

Anna

Contact your College of Engineering Graduate Student Career Consultants with questions:

Grad-Engineer-Careers@andrew.cmu.edu

Request a Career Consultant Appointment via Handshake: https://www.cmu.edu/career/handshake/