

AI-Powered Cover Letter Generator

The application has three main components, each contributing to the overall functionality.

1. Input Formatting

- Resume Input: Supports both PDF upload and manual text input for resumes.
- Job Description Input: Allows users to input job descriptions via URL or manual text entry.
- Additional Prompts: Permits users to add specific requests to further customize their cover letter.

2. Summarization using GPT-3.5

- The OpenAI GPT-3.5 model is employed for summarizing key components of the resume and job description separately.
- Utilizes a chat-based conversation with prompts for extracting relevant details, such as personal information, education, skills, job responsibilities, etc.
- Adaptive temperature and max_tokens parameters are used to control the creativity level and response length.

3. Cover Letter Generation

- Another API call to GPT-3.5 integrates the summarized resume and job description along with additional user prompts to guide the model in crafting the cover letter.
- User-specified prompts are included in the conversation to provide further customization options.
- Generated cover letter is displayed to the user, and a download link is provided.

3. Libraries and Technologies Used:

- Streamlit: Chosen for its ease of use in building interactive web applications.
- OpenAI API: Leveraged for powerful language generation capabilities.
- PyPDF2: Utilized for reading text from PDF resumes. Requests,
- BeautifulSoup: Employed for extracting text content from job description URLs.

- Base64: Facilitates the generation of a download link for the cover letter.

Design Decisions

- OpenAI's GPT-3.5 was selected due to its superior capabilities in language summarization, making it an ideal choice for crafting cover letters.
- Initial attempts with SpaCy (for Named Entity Recognition) and Gensim (for extraction summarization) were abandoned due to limitations in handling larger and complex resumes and job descriptions effectively.

Scalability

- The application can be scaled by moving to cloud technologies like AWS, ensuring efficient memory management, parallel processing, and data storage in the cloud.
- Docker containerization can be implemented for further scalability, enabling the application to run seamlessly in cloud environments

Snapshots of the system's working

Image #1. Landing Page upon launching

AI-Powered Cover Letter Generator

1. Enter URL for the job description or paste the job description.
2. Upload your resume as PDF or paste contents of your resume.
3. Add any additional requests you might have.
4. Click generate and wait for AI to do its ✨ magic!
5. Review the generated cover letter and download it.

Choose resume type

- ☒ PDF
- ☐ Paste

Upload your resume in PDF format



Drag and drop file here

Limit 200MB per file

Browse files

Choose job description type

- ☒ URL
- ☐ Paste

Enter Job Description URL

Would you like to add additional requests to the cover letter?

- ☐ Yes, add prompts!
- ☒ No, I leave it to AI!

Enter creativity level

0.90

- +

Generate Cover Letter

Image #2. Resume Text & Job Description Text with Custom Prompts

AI-Powered Cover Letter Generator

1. Enter URL for the job description or paste the job description.
2. Upload your resume as PDF or paste contents of your resume.
3. Add any additional requests you might have.
4. Click generate and wait for AI to do its ✨ magic!
5. Review the generated cover letter and download it.

Choose resume type

- ☐ PDF
- ☒ Paste

Paste resume here

VIDYASRI GANAPATHI RAVI

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EDUCATION

Master of Science in Computer Science Sep 2021 – Dec 2023

University of California Santa Cruz Santa Cruz, CA

• Coursework - Artificial Intelligence, Advanced Machine Learning, Foundations of Data Science, Statistical Data Analysis

Bachelor of Engineering in Computer Science Aug 2011 – Apr 2015

Press ⌘+Enter to apply

Choose job description type

- ☐ URL
- ☒ Paste

Paste job description here

Founding AI/ML Engineer # 🙋 Hello! We're ALMA We are a LegalTech startup on a mission to transform

Would you like to add additional requests to the cover letter?

- ☒ Yes, add prompts!
- ☐ No, I leave it to AI!

Enter Additional Requests to customize your cover letter (One request per line)


Hiring Manager is Aizada Marat
Keep it concise and professional

Image #3. Generating Cover Letter

Enter creativity level

0.90 - +

Generate Cover Letter

 Building your cover letter...




Image #4. Corresponding Generated Cover Letter

Generated Cover Letter:

Dear Aizada Marat,

I am writing to express my strong interest in the Founding AI/ML Engineer position at ALMA. With my educational background in Computer Science, extensive technical skills in AI/ML, and valuable work experience in the field, I believe I would be a great fit for this role.

Having completed my Master's degree in Computer Science with a focus on AI and Machine Learning, I have gained a solid foundation in advanced AI techniques and models. My experience includes fine-tuning AI models for customized use cases, implementing AI-powered products, and optimizing performance through experimentation and measurement.

I am located in the San Francisco Bay Area, making me readily available to join ALMA. Additionally, I have a strong understanding of AI model operations and tooling, along with experience in building applications on top of AI models. My track record demonstrates my ability to adapt and evaluate various types of AI models for different use cases.

Joining ALMA would not only allow me to work with mission-driven founders in the legal industry but also provide an opportunity to solve challenging problems using cutting-edge AI technology. I am excited about the prospect of contributing to ALMA's success and utilizing my skills in this role.

Thank you for considering my application. I would welcome the opportunity to discuss my qualifications further. Please feel free to contact me at your convenience.

Sincerely, Vidyasri Ganapathi Ravi

[Download Cover Letter](#)

Image #5. Resume PDF and Job Description URL

AI-Powered Cover Letter Generator

1. Enter URL for the job description or paste the job description.
2. Upload your resume as PDF or paste contents of your resume.
3. Add any additional requests you might have.
4. Click generate and wait for AI to do its ✨ magic!
5. Review the generated cover letter and download it.

Choose resume type

- ☒ PDF
- ☐ Paste

Upload your resume in PDF format



Drag and drop file here

Limit 200MB per file

Browse files



Vidyasri Ganapathi Ravi - Resume.pdf 98.2KB



Choose job description type

- ☒ URL
- ☐ Paste

Enter Job Description URL

<https://www.amazon.jobs/en/jobs/2499889/sr-machine-learning-engineer-research-engineer-amazon-l>

Information fetched from the URL successfully!

Would you like to add additional requests to the cover letter?

- ☐ Yes, add prompts!
- ☒ No, I leave it to AI!

Enter creativity level

0.90

- +

Generate Cover Letter

Image #6. Corresponding Generated Cover Letter

Generated Cover Letter:

Dear Hiring Manager,

I am writing to express my interest in the role of Sr. Machine Learning Engineer / Research Engineer at Amazon Development Center U.S., Inc. With my strong background in computer science, extensive experience in machine learning, and passion for research, I believe I am a great fit for this position.

Having completed a Master of Science in Computer Science from the University of California Santa Cruz, I have gained a solid foundation in Artificial Intelligence, Advanced Machine Learning, and Statistical Data Analysis. I have also gained hands-on experience with a broad range of programming languages and frameworks, including Python, R, Java, TensorFlow, and PyTorch.

Throughout my academic journey and professional experiences, I have successfully implemented various machine learning models and optimized their performance. As a Software Engineer Intern at MIMIO.ai, I developed efficient text corpora ingestion and querying mechanisms and fine-tuned language models for better performance. At CVS Health, I utilized propensity modeling to optimize pricing and automated manual tasks through Tableau dashboards. Additionally, I have experience working with large-scale computing resources and collaborating with interdisciplinary teams to develop state-of-the-art technology.

I am confident that my strong programming skills, experience in optimizing model inference, and understanding of GPU architectures make me a strong candidate for this role. I am excited about the opportunity to contribute to innovative algorithm development and accelerate advances in machine learning and foundation models at Amazon.

I am available to discuss my qualifications further and would appreciate the opportunity to interview for this position. Thank you for considering my application.

Sincerely,

Vidyasri Ganapathi Ravi

[Download Cover Letter](#)