

GABRIEL FONSECA

Mechanical Engineer

E 13236494996

q <https://www.linkedin.com/in/gafonse/>

✉ gafonse@berkeley.edu

📍 Los Angeles, CA

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SUMMARY

Enthusiastic Mechanical Engineering student with a solid academic track record and a passion for rocket propulsion projects. Excited about joining a team environment to support senior engineers on innovative projects. Possessing strong problem-solving skills and a proactive approach to tasks, eager to contribute to the development of hardware. Ready to bring a hands-on attitude and dedication to any opportunity.

EXPERIENCE

Lead Mechanical Integration Engineer

Space Technology and Rocketry

📅 08/2022 Present 📍 Berkeley, CA

- Led the creation of comprehensive mechanical integration work instructions for STAR's propulsion engines, enhancing production efficiency.
- Executed integration instructions in cleanroom settings, meeting 100% of spaceflight standards for manufacturing engineers.
- Directed development and execution of functional and environmental tests, ensuring spacecraft hardware's launch readiness.

Lead Event Organizer

New Space

📅 08/2023 Present 📍 Berkeley, CA

- Successfully managed the Space Technology Career Fair with over 1,000 participants.
- Coordinated advanced space technology exhibits and prototypes, showcasing cutting-edge research.

Research Engineer

Green Concrete Research Group

📅 06/2023 Present 📍 Berkeley, CA

- Led team in designing renewable concrete, enhancing sustainability by 20% with plasma reheating techniques.
- Conducted extensive research and experiments and contributed to several publications.

Start Up Tech Repair Company

Q.C.

📅 04/2023 Present 📍 Los Angeles, CA

- Provide tech repair support for smartphones and personal computers
- Lead a small team of tech repair specialists
- Continuously expanding company horizons by recruiting team members, and meeting clients

Project Lead

CalHacks Berkeley AI Model

📅 01/2023 02/2023 📍 San Francisco, CA

- Developed chatbot fine-tuned LLAMA 2 13b model, utilizing 3500 Q&A samples for optimization, ensuring authentic and unbiased interactions
- Engineered chatbot to emulate a UC Berkeley student, offering guidance through campus life by leveraging the collective intelligence of the Berkeley Subreddit

EDUCATION

Mechanical Engineering

University of California, Berkeley

📅 08/2022 01/2026 📍 Berkeley, CA

SKILLS

Computer-Aided Design

Finite Element Analysis

Mathematical Modeling

Data Machining and Fabrication

Thermodynamics

Github

Java

Machine Learning

Matlab

PCB Design

Python

Robotics

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Linkedin

<https://www.linkedin.com/in/gafonse/>

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Github

<https://github.com/m0zzaR>

KEY ACHIEVEMENTS

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Mechanical Integration Excellence

Led propulsion engine assembly, ensuring 100% spaceflight standard compliance.

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Innovative Tech Career Fair

Organized a flagship event, attracting 500 attendees and 20 industry leaders.

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☐

Sustainable Concrete Development

Conducted extensive research in new generation of concrete

☐

AI Chatbot Project Lead

Developed and fine-tuned AI model off of UC Berkeley's reddit.

What are you most proud of?

Why are you proud of this achievement?

