



Structural Analysis Engineer

Verne is developing innovative hydrogen technology that enables heavy-duty transportation (trucks, ships, and planes) to operate with zero emissions. Heavy-duty transportation is vital to the functioning of our global society but is also responsible for 10% of global greenhouse gases. If vehicles switch from fossil fuels to green hydrogen, they can operate without producing any emissions. However, two challenges prohibit this transition: storing enough hydrogen onboard to power their operations, and access to this hydrogen to refuel.

Verne is bringing to market two technologies that simultaneously address these challenges. First, Verne has developed a new way to increase the density of hydrogen gas. This equipment will be installed at refueling stations, converting low density hydrogen into ultra-high-density hydrogen fuel. Second, Verne has developed a way to store this high-density hydrogen onboard vehicles. Together, these two technologies more than double the amount of hydrogen that can be stored onboard vehicles, doubling vehicle range and allowing them to carry a full payload. With Verne's technology, vehicles can maintain current operations while eliminating harmful emissions.

Verne has made significant strides toward this massive industrial transformation and is conducting demonstration programs for vehicle and equipment manufacturers. Verne has gained the support of leading technology institutions, including MIT, Caltech, and Stanford. All three co-founders were selected as fellows in the inaugural cohort of Breakthrough Energy's new fellowship program, supported by Bill Gates.

What you'll do:

As a Structural Analysis Engineer, you will provide critical engineering support for the development of both of our hydrogen systems: on-board storage and refueling equipment. This cross-functional role will provide unique exposure to Verne's innovation pipeline and technology development for demonstrations. You will work closely with other Verne engineers to accomplish company-wide objectives.

Specifically, you will support the following areas of Verne's engineering development:

- Conduct structural, dynamic, and thermal analyses to iterate on and finalize the component designs for our on-board storage systems
- Support the prototyping, testing and design validation of our storage systems for first-of-kind demonstrations for OEMs and national laboratories
- Collaborate with our OEM partners to develop and refine testing and vehicle integration details
- Champion a culture of safety and high-quality work across design, development, and implementation

Key qualifications:

- Degree in Mechanical Engineering or similar
- A focus on mechanics of materials is required, with expertise in dynamic analysis and heat transfer considered a plus
- High degree of skill in structural analysis using a variety of approaches, including hand calculation and finite element analysis (FEA)

- Experience with hands-on designing, analyzing, and testing of mechanical systems, ideally within the transportation or automotive industry
- Experience with computer-aided design and stress analysis software packages such as Solidworks, Abaqus and Ansys
- Excellent and fast learner, able to quickly synthesize new information and tackle new problems
- Independence and self-reliant engineer who can check analysis results with hand calculations and/or test results
- Strong team player, able to effectively communicate with others to address mission and time critical complex problems
- Interest in playing a core engineering role for a growing early-stage startup
- Passion for driving large-scale decarbonization and a desire to be at the forefront of the global efforts to combat climate change

Compensation and benefits:

- Competitive salary and equity incentives
- Medical and dental insurance
- Flexible hours & paid time off
- Join a collaborative and passionate team
- The opportunity to shape the rapidly growing green hydrogen industry
- The opportunity to work closely with leading transportation decarbonization partners

Location

- San Francisco
- Key vendors, suppliers, and partners in the broader Bay Area

About the Verne team

At Verne we value a diversity of approaches to critical thinking. We aim to establish an environment that welcomes different perspectives, where informed discussions flourish and each individual voice is respected. The team thrives in asking questions to gain a more nuanced understanding. We all strive to provide constructive feedback and ultimately aim to make each of us a better listener, thinker, and leader. Lastly, our mission is ambitious and difficult, so we don't forget to have fun!

About Verne

Verne is an Equal Opportunity Employer and does not discriminate based on race, color, creed, gender, religion, marital status, registered domestic partner status, age, national origin, ancestry, physical or mental disability, medical condition, sex, genetic information, sexual orientation, military and veteran status or any other consideration made unlawful by federal, state, or local laws. It also prohibits unlawful discrimination based on the perception that anyone has any of those characteristics or is associated with a person who has or is perceived as having any of those characteristics.

To apply: Please send resume and cover letter to contact@verneh2.com