



Mechanical Engineer

Verne is developing innovative hydrogen technologies that enable 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 high-density 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 in the midst of pilot program design with vehicle manufacturers. Verne has gained the support from leading technology institutions, including MIT, Caltech, and Stanford, and 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 Mechanical 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:

Innovation

- Develop and refine thermodynamic models for hydrogen compression and cryogenic cooling, and carry out energy efficiency analyses for multiple designs and use cases
- Contribute to the modeling and design efforts on novel insulation systems for on-board storage
- Support the modeling and design efforts on light-weight back-of-cab support structures that host cryo-compressed tanks
- Promote technical relationships with national and academic laboratories

Technology Development for Demonstrations

- Support the establishment of safety protocols and analyses for demonstrations of our early prototypes
- Develop first-of-kind refueling equipment in collaboration with vendors and the engineering team
- Provide critical engineering support for on-board storage system integration, including sensors, electronics, and operations
- Collaborate with our OEM demonstration partners to develop and refine testing and integration details

Key qualifications:

- Background in chemical or mechanical engineering, M.S. or beyond
- 2+ years of industry experience with hydrogen, cryogenic systems, high-pressure systems, liquefaction, and/or energy analysis
- Excellent and fast learner, able to quickly synthesize new information and tackle new problems
- Excellent team player, able to effectively communicate with others to address mission and time critical complex problems
- Strong interest in entrepreneurship and engineering 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 on the basis of 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