

## Chief Architect Navigation & Localization

### Description

Anduril seeking a skilled navigation, localization, and positioning leader with strong experience in robotics-focused pose localization techniques. This role emphasizes the design and implementation of Inertial Navigation Systems (INS) while leveraging sensor fusion algorithms and pose estimation methods for precise navigation of robotic vehicles. The ideal candidate will be a proven technical leader who can influence our organization to make the right decisions, demonstrate customer empathy, build trust with partners, mentor teammates, and transform culture within the team.

WHAT YOU'LL DO

- Design and develop algorithms for real-time navigation, path planning and obstacle avoidance systems in a nominal, degraded and contested/adversarial environment (jamming, spoofing etc)
- Implement sensor fusion techniques to integrate data from multiple sensors such as GNSS, IMU, LIDAR, radar, sonar and cameras to enhance the accuracy and robustness of vehicle navigation where applicable
- Develop simulation and testing environment to evaluate the performance of Navigation and Localization solutions under different environmental conditions and scenarios
- Optimize and design fault tolerant algorithms for computational efficiency and robustness to ensure reliable operation in challenging and contested environments
- Analyze mission requirements and constraints across the Anduril product portfolio to determine optimal navigation, localization, and positioning system architecture
- Lead an Anduril-wide navigation, localization, and positioning community of practice
- Lead the navigation, localization, and position strategy, roadmap and solution architecture for Anduril Drive evaluation and integration of advanced alternative navigation aiding sources
- Design, develop, integrate and test inertial navigation systems (INS), GNSS products, visual navigation, and other related technologies for autonomous military vehicles (UAS, spacecraft, missiles, ground vehicles, underwater vehicles etc.)
- Develop algorithms for navigation, localization, and positioning systems, including Kalman filters (Extended-KF, Unscented-KF, Ensemble-KF, Iterated-EKF, Gaussian Sum Filter) and other estimation methods using various programming languages
- Architect and improve calibration procedures for sensor suites used in navigation systems
- Collaborate with multidisciplinary teams to integrate navigation solutions into overall vehicle systems
- Conduct rigorous simulation and testing for validation of navigation algorithms and systems performance
- Stay up-to-date with the latest developments and research in navigation technologies

REQUIRED QUALIFICATIONS:

- Master's or PhD degree in Aerospace Engineering, Electrical Engineering, Computer Science, Robotics or a related field
- Proven experience in developing Navigation and Localization algorithms for autonomous vehicles, robotics, drones, maritime vehicles or similar application
- Experience with sensor calibration, sensor fusion, state estimation, and SLAM (Simultaneous Localization and Mapping) techniques
- Strong knowledge of navigation principles, including inertial navigation, GPS, and other sensors such as star trackers
- Experience with navigation, localization, and positioning systems design and development
- Deep expertise in Kalman filtering, Extended Kalman filtering, and other estimation techniques
- Experience with real-time systems and diverse software development
- Knowledge of sensor fusion and data integration techniques
- Strong problem-solving and analytical skills
- Experience applying covariance analysis techniques to optimize navigation system performance, error modeling, and system uncertainty assessments, and requirements methods
- U.S. Person status is required as this position needs to access export controlled data.

PREFERRED QUALIFICATIONS:

- Experience applying real-time pose localization algorithms from robotics to enhance the accuracy and robustness of aerospace vehicle navigation.
- Experience in developing navigation and localization solutions
- Please mention the word \*\*HALLOWED\*\* and tag RMTA3LjE3OC4yMzkuMjA5 when applying to show you

### Hiring organization

Anduril Industries

### Job Location

Costa Mesa, California, United States

### Base Salary

\$ 95000 - \$ 125000

### Date posted

May 17, 2024

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## **Contacts**

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