Our group's mission is to design, prototype and productionize novel methods and tools for efficient modeling and simulations of complex systems at scale. These tools aid in measuring the safety of our AI and readiness for launch. We use recent advances in machine learning, statistics, optimization, and numerical methods to verify and validate our software and AI in the most challenging environments, and subsequently develop tools to enable other teams at Zoox to do the same.

We are looking for software engineers to help improve autonomous driving safety using large-scale, distributed optimization and machine learning. In this role, you will leverage simulation and real-world driving data to design efficient solutions leveraging cutting-edge rigorous methods. You will work cross-functionally with engineers in AI, simulation, infra, and data science to push the boundaries of scalability and performance, and bring state-of-the-art machine learning and optimization applications to production.

Responsibilities

Design and implement algorithms and methods to improve optimization capabilities

Design large-scale optimization problems in an efficient way

Analyze driving data and identify novel approaches

Lead complex cross-functional projects

Communicate your work to other teams at Zoox

Qualifications

MS or PhD in optimization, statistics, or machine learning

Solid computer science fundamentals

Fluency in Python

Experience with numerical optimization

Experience with distributed systems and running services in the cloud

Bonus Qualifications

Experience with black-box optimization and its application to hyperparameter tuning or large-scale simulations

Experience with multi-objective optimization

Experience with autonomous vehicles

Proficiency with Python's scientific stack, incl. machine learning and statistical frameworks (numpy, scipy, pandas, pytorch, pyMC3, etc.), and practical experience with distributed & GPU computing and modern SW development practices.

Compensation

There are three major components to compensation for this position: salary, Amazon Restricted Stock Units (RSUs), and Zoox Stock Appreciation Rights. The salary range for this position is $160,000 to $226,000. A sign-on bonus may be offered as part of the compensation package. Compensation will vary based on geographic location and level. Leveling, as well as positioning within a level, is determined by a range of factors, including, but not limited to, a candidate's relevant years of experience, domain knowledge, and interview performance. The salary range listed in this posting is representative of the range of levels Zoox is considering for this position.

Zoox also offers a comprehensive package of benefits including paid time off (e.g. sick leave, vacation, bereavement), unpaid time off, Zoox Stock Appreciation Rights, Amazon RSUs, health insurance, long-term care insurance, long-term and short-term disability insurance, and life insurance.

About Zoox

Zoox is developing the first ground-up, fully autonomous vehicle fleet and the supporting ecosystem required to bring this technology to market. Sitting at the intersection of robotics, machine learning, and design, Zoox aims to provide the next generation of mobility-as-a-service in urban environments. We’re looking for top talent that shares our passion and wants to be part of a fast-moving and highly execution-oriented team.

Follow us on LinkedIn

A Final Note:

You do not need to match every listed expectation to apply for this position. Here at Zoox, we know that diverse perspectives foster the innovation we need to be successful, and we are committed to building a team that encompasses a variety of backgrounds, experiences, and skills.