# Software Engineer - Eng I, II or Senior
# Machine Learning/Computer Vision

### *US Persons Only*

**Location:** Pittsburgh, PA (on-site only, relocation assistance available)
**Status:** Full-time, open immediately (November 2021 Posting)

### Compensation:

Base Salary: $75k-$105k (wide range due to spread in expertise that we're interested in)

401k: 4x match on 3% of employee contribution (12% addition to base)

Health Care: $200/month subsidy per employee

Equity: 1 year cliff, 48 months to 100% vest, contributed monthly.

### Who we are:

KEF Robotics Inc. is seeking talented Robotic Software Engineers to join our team and develop flight software for autonomous UAVs. Founded December 2018, we're on a strong trajectory in a disruptive technology area, and have already attained a number of significant milestones:

- We were featured in the New York Times in our first 100 days as a company
- We finished as the top qualifier of 424 teams in Lockheed Martin's AlphaPilot competition in our first six months as a company, ahead of numerous talented research groups
- Significant annual revenue growth and 20+ months 'runway'

KEF was founded by an experienced R&D team, which arrived at drone autonomy after achieving recognition as the premier spacecraft navigation software development team in the world (the tech we pitched and built was going to land us on the Moon and Saturn's Enceladus!). We've honed an ability to operate efficiently, and know how to get our message out, so you'll be joining a competent and cohesive team with no extra baggage.Why work at KEF:

We limit distractions and offer you a huge amount of freedom. If our engineers need equipment or outside connections to solve a problem, we will get it for them immediately. Our goal is to help you become a world-class expert within three years, and our philosophy is to bring in great talent and let them get to work.

At this early stage we're offering equity, and we offer big-company benefits where we can: subsidized healthcare for all employees, unlimited vacation (take it), and a generous 401k match. And while we tackle huge technical challenges and demand excellence, working hours are reasonable--we presume that the best talent will seek robust lives outside the office.

Finally, we're committed to diversity on the ground floor and will take the time to train great talent from unusual backgrounds. We want personality and drive over experience and expertise.

**Who we're looking for:**

We're looking for smart, bold, driven, humble researchers who bring a great attitude to work and want to help us draft out, build, and polish a great company. We need fearless learners and active questioners who dig into research and development and solve technical problems.

**Role Responsibilities:**

- Improve UAV autonomy through machine learning perception that leverages our state-of-the-art GNC technologies.
- Research, implement, and train neural networks for object detection and localization, image registration, depth estimation, and other challenging visual perception tasks.
- Optimize inference for real-time computation on embedded platforms

**Strongly Recommended Skills:**

- Empathetic and collaborative team player
- Proficiency with Python, familiarity with C++
- Machine learning and experience programming within a popular ML framework (TensorFlow, PyTorch, etc)
- Experience with supervised, semi-supervised, and transfer learning of neural networks
- Familiarity with Linux and Linux tools
- Experience in developing computer vision algorithms
- Strong mathematical foundation of deep learning techniques
- Ability to read scientific publications and implement proposed solution
- Experience testing UAVs in a variety of environments, both indoors and outdoors

**Bonus Skills:**

- Familiarity with ROS (Robot Operating System)
- Experience with robotics state estimation and simultaneous localization and mapping (SLAM) algorithms
- Experience programming for embedded environments
- Familiarity with nonlinear optimization techniques
- Unreal Engine / Unity experience
- Julia programming experience
- Clear, concise technical writing skills