Describe your overall duties/responsibilities as a Computer Vision Engineer:

As a computer vision engineer for unmanned surface vessels (USVs), my role is to develop novel algorithms that enable unmanned vessels to perceive their environment and make informed decisions based on what they “see”. On a regular day, I work towards the design and implementation of novel computer vision algorithms that enable the vessel to detect, classify, and track important objects in its surroundings. Computer vision projects are inherently interdisciplinary, so another responsibility I have is working collaboratively with other engineers to integrate the computer vision system with other components of the unmanned vessel, such as the hardware, navigation, and control systems.

Explain the skills/abilities that are required for being successful in your role:

To become a successful computer vision engineer, it is important to possess both technical and soft skills. On the technical side, expertise in software development is valuable, such as a strong command of programming languages like Python or C++, and familiarity with computer vision libraries and frameworks, such as OpenCV and TensorFlow. Soft skills, such as communication, writing or presentation abilities are also important to work effectively with cross-functional teams, which may include hardware engineers, product managers, and end-users. Finally, I think possessing a passion for learning and an innate curiosity is an important trait for a computer vision engineer because this field is constantly evolving (which is great!), and keeping to date with the most groundbreaking and latest research is necessary to deliver innovative solutions.

What advice would you give to students who are considering majoring in Biological Engineering?

I recommend that students keep up with technical software skills, but to also work towards being effective writers, presenters, or collaborators.