

I had the pleasure to present promising research from the Autonomous Systems Research Laboratory (ASRL) at the AIAA NEXT GEN Technical Symposium, formerly the Young Professional Symposium, in Huntsville, Alabama. This conference is a professional setting for young engineers in the Aerospace industry to come and present the work they are doing in academia or in their job. This made the conference a perfect opportunity for me to gain experience in this arena, so Dr. Kim, my faculty advisor, strongly encouraged me to attend. The conference was attended primarily by young engineers from schools and companies in the Huntsville area, and I was the only undergraduate in attendance. I gave a fifteen-minute oral presentation of our lab's project, titled "Development of a System for Monitoring Structural Cracks with Unmanned Aerial Vehicles Using Deep Learning Models and Position Estimation". It demonstrated the capability of a system combining image recognition and image processing algorithms with autonomous aerial vehicle platforms to augment inspectors' ability to monitor the health of large structures such as bridges or buildings. Much of this research was done prior to this semester, and it was my responsibility to improve upon the work done before me as well as expand the documentation of the system. Currently, I am preparing a paper detailing the system, and we hope to have it published by the end of the year. By attending this conference, I learned a great deal about giving professional presentations and had the opportunity to speak with engineers in the industry that are just a few years further into their careers than I am. This provided me with great insight into what my career path could look like since I expect to graduate in May 2019. Furthermore, in the effort to present the system in a succinct and compelling fifteen-minute presentation, I am better equipped to discuss the system's technicalities and performance in the future. For these reasons, I am very grateful to have received the Honors Travel Award that made my attendance of this symposium possible.