

EE/CprE/SE 491 WEEKLY REPORT 01

Beginning of semester - 9/19/2024

sdmay25-21

Distributing a fleet of drones over an area with no-fly zones

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Weekly Summary:

This week, our primary objective was to coordinate and establish a regular meeting time with our advisor, Professor Goce, to gain a clearer understanding of the goals and expectations for both the initial weeks and the broader scope of the first semester. In our discussions, we also delved deeper into team dynamics, exploring individual strengths and areas for development, as well as identifying additional times outside of our scheduled weekly meeting that would be suitable for the group to convene, should the need arise.

During our meeting with Professor Goce, he provided us with a series of research tasks and readings, with a particular focus on advanced computational geometry. These assignments are intended to deepen our understanding of the subject matter and enhance our preparedness for the challenges ahead.

Past week accomplishments:

This week, our team concentrated on researching key techniques to ensure we achieve our project's objectives. We collectively met with Professor Goce on Monday at 6:10 pm, where he provided us with essential reading materials on computational geometry and K-D trees, which are critical for the implementation phase of our project.

Research on Computational Geometry and K-D Trees: Each team member has been assigned different aspects of these topics to explore. I focused on the practical applications of K-D trees in spatial search algorithms, while others delved into the mathematical underpinnings of computational geometry. This knowledge will help us optimize data organization and retrieval in our system.

Documentation and Assignments: We also worked on preparing documents for book-keeping and for the upcoming assignment submissions. I specifically contributed by drafting the project timeline and organizing the list of research papers and references we've collected thus far. Other team members handled task management and document formatting.

Next week, we will use this research to start implementing the core algorithms and testing their efficiency in our system.