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**Decentralized Intelligent Coordinating  
Visualization System**  
*Personal Statement*

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There exists only a few pieces of rising technology that both terrifies me and fills me with immense interest. One of those pieces of technology is none other than Autonomous Vehicles specifically Self-Driving Cars. To be able to have your life depend on a 3 ton, autonomous vehicle that is fully unmanned just to get to work or school is a beautiful statement that I nor other people would have never thought to be able to say in our life time. So then the question is not why do you want to pursue this research but rather why would you not? My name is Justin Le, I am a 3rd year Computer Engineering major at UCI and I want to pursue this research because while it will require an immense amount of research, work and dedication, this is something that greatly interests me and aligns with my career goals.

While Autonomous Movement is a core part of our research, there is so much more to it such as the use of LIDAR for 3D mapping, the idea of a decentralized yet intercommunicating set of systems, machine learning, machine vision and embedded systems. Everything that we have ideally planned for this research project is something that has numerous of applications, all of which I can see greatly benefiting me for my career as an inspiring engineer and one day, hopefully, as an embedded systems engineer.

This research idea is relatively new proposal that was brought to my attention only recently from a colleague of mine. We of course have already started some research on this topic such as the use of LIDAR for 3D mapping and looking into Goal-Line machine vision software which will each serve a key part of the overall system we plan to build. My background in some of the key features of this research comes from my involvement in side projects and my own personal self-studies. Some classes that may be beneficial for this research are Machine Vision, Processor Hardware/ Software Interface, Database Management, Parallel Computing, and Computer Networks, all of which I have taken or will take in the future. Any knowledge that I may lack will be my own responsibility to self-teach or seek help from our faculty advisor or another professor which I am very much eager and open too. What better way to learn something than to have a professor at a prestigious university help teach me.

Besides classes and side projects, I have also gained a lot of experience from my involvement in the California Plug Load Research Center specifically working on an Energy Management in Projectors and Display Technology project. This taught me a lot about firmware, databases and power management which I can use to further pursue this research. From this experience, I have also learned what it means to do real research which I know can apply to my current interest in this research.

This research project needs funding because there are many hardware components that are essential for this system to function that are costly. I truly believe that this research project deserves the funding because of its significant role it could bring to the industry field especially due to the rising age of autonomous technology, exploration and the other numerous applications this project covers.