The goal of the project proposal is to describe your idea and justify why it is worthwhile. You should explain what you want to do, provide a bit of background in your topic area, and argue persuasively that your idea will lead to a good project. You should research and write the proposal as a group, and submit a single copy for your team. The proposal should be 1-2 pages in length. The structure is up to you, but here are some things that a good proposal should include:

### Project Idea

- **Basic Concept:** What is this project about? This is not a complete product specification. It is a concise description of the idea, but with enough detail to make it absolutely clear what is being attempted.
- **Need Assessment:** Who will use this device or program? Why do they need it? What do they use now?

### Questions to Ponder

- **Related Work:** What has already been done in this area? What are the strengths and weaknesses of existing products? What areas have not been addressed? If this is a brand new idea, how does it relate to existing products, and why hasn't it been done before?
- **Why your project will be better:** What will you do to advance the state of the art? What will be possible with your product that isn't possible now?
- **Assessment of risk:** What are the major risks in the project you are attempting? If you fail, what will be the most likely cause? What can you do to reduce the risk?

### Implementation Issues

- **Algorithms:** How might the computer vision component of the project work? What computer vision techniques or algorithms are you thinking of using?
- **Hardware:** What input and output devices will you use? Will you need any special hardware?
- **Software:** What language are you planning to code in? What software libraries and development tools are you planning to use?

Bring your proposal to your Thursday project meeting to hand in.