CS Research Project

Reading

- Quora: Hot Topics in CS Research

Research / Exploratory projects

3D Graphics

- Research component:
    - Review existing research in 3D graphics and VR.
    - Review 3D development libraries and workflows
    - Choose 1 technology to focus on (e.g. Unity SDK and Oculus Rift) and familiarize yourself with the workflow. Keep detailed notes of what you learn in your exploration.
- Development component:
    - Develop a 3D game or world.
    - This could include artistic components including sketches and mock-ups to help establish the environment or "feel" or the world you create.

Web / Mobile App

- Research component:
    - Determine the purpose and functions of your app.
    - Review apps in the market that are similar or related.
- Development component:
    - Create any necessary design and modeling assets, for example: UI mockups, client-server interaction diagrams, etc.
    - Develop a working prototype.

CS Topics

- Some important areas of CS research include:
    - HCI / user-interface design
    - Computer graphics
    - Data analysis & visualization
    - AI & machine-learning
- Research component:
    - Choose your area of research from above or propose another.

- Review the research literature in the area. Note that the academic literature may be very difficult, so literature for the general audience (e.g. Scientific American or other publications) may be accepted.
- Review software tools and libraries that are related to this area.
- Choose 1 tool or library and familiarize yourself with it. Keep detailed notes.
- Implementation component
  - Implement a program or program module related to your area of research.
  - Be prepared to explain (in writing) the relevance of what you chose to implement.