

# Super FPGA Bros.

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*Alternatively, Matt Vaughan Finally Finishes 6.111*

Our goal is to implement a simple side scrolling platform based video game with a novel user interface. The project will involve taking input data from a pedometer, as well as motion capture data obtained from a video camera and head rig worn by the user. These inputs will be directed to a video game logic module, which will implement a game reminiscent of the classic Nintendo Entertainment System application, *Super Mario Bros*. The pedometer will be polled for user steps in order to determine the movement rate of the player's in-game avatar. Motion capture data will be used to determine character state, i.e. crouching, jumping, or other additional actions that may be implemented.

Additional planned features in the event of early completion may include a 2 player competitive race gametype, an additional secret game mode, or an entirely different game that utilizes the same user interface. The player avatar will be a digitized representation of Class of 2010, Matthew P. Vaughan.

Team Members:

- Kevin Marengo
- Douglas Albert

Additional Components:

- Pedometer
- Baseball Cap & Ping Pong Ball for head rig
- Video Camera for motion capture

Module Planning:

- Video & Pedometer Capture Module
- Game Logic Module
- Video Output Module
- AC97 Sound Output Module