**Performing robots**

Detailed plan for your actor, addressing:

* Areas of greatest risk or uncertainty
  1. Computer vision – we have identified that we can track blobs on the computer using the openFrameworks software, and need to verify in the real world.
  2. Can we implement directionality of the robot?
  3. Reliance on camera
* Mechanical
  1. Have steps as landmarks (maintain stability)
  2. Rubber traction wheels
  3. Breadboard
  4. universal hub mounts (Polulu) or 3D print
  5. Visible color marker on robot (paint/sticker?)
* Electronics
  1. Bluetooth controller (robot + openFrameworks)
  2. Accelerometer
  3. Gyroscope
  4. DRV8838 motor driver with max 1.7 A (different model for higher current)
  5. Arduino Uno
* Software
  1. Open frameworks (Open CV, and communication)
  2. Robot sensing object (proximity), send signal to computer and computer generates word
* Power
  1. +12V power supply for motor
  2. 5 V supply for Arduino Uno
* References
  1. List from http://www.brokking.net/yabr\_main.html) [[http://www.brokking.net/images/link.gif](http://www.dx.com/p/geeetech-1-8-degree-nema-14-35-byghw-stepper-motor-for-3d-printer-black-386069?Utm_rid=78761898&Utm_source=affiliate)2 x 35mm Stepper motor](http://www.dx.com/p/geeetech-1-8-degree-nema-14-35-byghw-stepper-motor-for-3d-printer-black-386069?Utm_rid=78761898&Utm_source=affiliate)
  2. [[http://www.brokking.net/images/link.gif](http://www.dx.com/p/geeetech-stepstick-drv8825-stepper-motor-driver-carrier-reprap-4-layer-pcb-heat-sink-purple-366006?Utm_rid=78761898&Utm_source=affiliate)2 x Geeetech StepStick DRV8825](http://www.dx.com/p/geeetech-stepstick-drv8825-stepper-motor-driver-carrier-reprap-4-layer-pcb-heat-sink-purple-366006?Utm_rid=78761898&Utm_source=affiliate)
  3. [[http://www.brokking.net/images/link.gif](http://www.dx.com/p/mini-dc-7-28v-to-dc-5v-step-down-converter-power-supply-module-green-black-398251?Utm_rid=78761898&Utm_source=affiliate)1 x Mini DC 7~28V to DC 5V step-down converter](http://www.dx.com/p/mini-dc-7-28v-to-dc-5v-step-down-converter-power-supply-module-green-black-398251?Utm_rid=78761898&Utm_source=affiliate)
  4. [[http://www.brokking.net/images/link.gif](http://www.dx.com/p/11-1v-2200mah-30c-li-polymer-battery-pack-for-450-helicopter-dji-phantom-1-450-quadcopter-366131?Utm_rid=78761898&Utm_source=affiliate)1 x 11.1V 2200mAh 30C Li-polymer Battery](http://www.dx.com/p/11-1v-2200mah-30c-li-polymer-battery-pack-for-450-helicopter-dji-phantom-1-450-quadcopter-366131?Utm_rid=78761898&Utm_source=affiliate)
  5. [[http://www.brokking.net/images/link.gif](http://www.dx.com/p/b3ac-2s-3s-lipo-balance-charger-black-ac-100-240v-103589?Utm_rid=78761898&Utm_source=affiliate)1 x B3AC 2S/3S Lipo balance charger](http://www.dx.com/p/b3ac-2s-3s-lipo-balance-charger-black-ac-100-240v-103589?Utm_rid=78761898&Utm_source=affiliate)
* Schedule (by week #)
  1. Decide on normal/ balancing robot (check possibility of going up/balance on slope). Determine whether open CV works
  2. Use laser cutting/wood materials to design aesthetics of robot. Test with playtesting stage, and finalise robot-environment interactions