



Tom Farro

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EDUCATION

WORCESTER POLYTECHNIC INSTITUTE (WPI)

BS in Robotics Engineering
Minor in Game Design
Expected May 2017 | GPA: 3.50

COURSEWORK

ROBOTICS

Introduction to Electrical Engineering
Digital Circuit Design
Embedded Systems
Static and Dynamic Systems
Robotic Sensing
Robotic Navigation
Controls Engineering

COMPUTER SCIENCE

Object Oriented Design
Software Engineering
Artificial Intelligence
Webware

GAME DESIGN

Game Design Process
Storytelling in Interactive Media
Novel Controllers and Interfaces
Social Issues in Interactive Media

SKILLS

SOFTWARE

Languages:
C# • C • Java • HTML5
CSS3 • Python • LaTeX

Tools and Utilities:
ROS • Linux • Git
Visual Studio • Unity3D

HARDWARE

Soldering • Arduino
Mechanical Analysis
Circuit Analysis

ACCOLADES

- 2013 - 2016 | **Dean's List** from Undergrad Admissions
- 2016 | **Best College Alpha** from MassDiGI Game Design Challenge
- 2016 | **Chosen to Showcase** at Boston Festival of Indie Games

PROJECTS

INTERACTIVE SEGWAY ROBOT | PROGRAMMER / UI DEVELOPER

Ongoing

- Provide automated registration for walk-in Emergency Room patients and/or hospital visitors through a calming and intuitive onboard UI.
- Interface with hospital database to automatically assign patient a room, escort them there, and alert a doctor to tend to them.

HEIST NIGHT | LEAD PROGRAMMER / PROJECT HEAD

Ongoing | Winner of "Best College Alpha" and Chosen to Showcase at BFIG

- Digital board game featuring stealth mechanics only possible with a video game.
- Players scan on-screen QR code to connect with mobile devices, which serve as private screens.
- Locally hosts HTML5 content server at game runtime.
- Features custom Unity3D-to-HTML5 WebSocket networked communications.

AUTONOMOUS TURTLEBOT | PROGRAMMER

Spring 2016

- Automatically parsed visual data from on-board Kinect sensor in to a live map.
- Used A* to plan efficient routes towards unexplored regions of the map.
- Explored until the entire navigable area was discovered and parsed.
- Programmed in Python for ROS (Robot Operating System), running on Ubuntu.

WPI MAPPER | DEVELOPER TOOLS PROGRAMMER / PROJECT MANAGER

Fall 2015

- Calculated A* routes around campus based on map networks stored remotely.
- Featured developer tools that allowed multiple people to edit map server data without conflicts.
- Programmed in 7 weeks with a randomly assigned team of 9 students, using Agile development techniques.

ROBOTIC FIREFIGHTER | MECHANICAL DESIGNER / PROGRAMMER

Spring 2015

- Autonomously navigated randomized mazes to locate and extinguish a fire.
- On-board odometry equipment tracked and reported robot and fire position.
- Designed, programmed and built in 7 weeks.

WORK EXPERIENCE

LEGO | BRICK SPECIALIST

June 2015 – Present | West Nyack, NY

- Delivering exceptional customer service.
- Running periodic store events to help foster building skills in children.

CONTRACT WORK | ELECTRONIX ONLINE TUTOR

January 2016 – July 2016 | University of Memphis

- Helped design mock-up interfaces for tutor program.
- Constructed webpage framework.
- Worked and coordinated with a distributed team.

EMAGINATION COMPUTER CAMPS | TECHNOLOGY COUNSELOR

June 2014 – Aug 2014 | Waltham, MA

- Taught technical skills to children aged 7 to 17 in daily classes, including programming and game design.