



Tom Farro

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PROJECTS

HOSPITAL LOBBY ASSISTANT ROBOT | PROGRAMMER / UI DEVELOPER

Ongoing

- Provides streamlined patient registration through on-board touchscreen UI, then assigns a room, alerts a doctor and escorts the patient there.
- Features robust custom infrastructure that connects browser-based UI to the back-end ROS Python nodes.

HEIST NIGHT | LEAD PROGRAMMER / PROJECT HEAD

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

- Turn-based, local multiplayer stealth tactics game.
- Players scan on-screen QR code to use mobile devices as private game screens, without needing a companion app.
- Hosts local web content server at runtime to serve controllers.
- Features custom C#-to-JavaScript WebSocket networking using JSON API.

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.

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.
- Built in Java using Agile development techniques over 7 weeks with a randomly assigned team of 8 other students.

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 in C, 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.

SKILLS

SOFTWARE

Languages:

C# • C • Python • JavaScript
HTML5 • CSS3 • Java
Ruby • SQL • RAPID

Tools and Utilities:

Unity3D • Visual Studio • Git
Socket.io • jQuery • NodeJS
ROS • Linux • RobotStudio
Asana • Trello

HARDWARE

Soldering • Arudino
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

EDUCATION

WORCESTER POLYTECHNIC INSTITUTE (WPI)

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

COURSEWORK

COMPUTER SCIENCE

Object Oriented Design
Software Engineering
Artificial Intelligence
Webware

GAME DESIGN

Game Design Process
Storytelling in Interactive Media
Novel Controllers and Interfaces

ROBOTICS

Digital Circuit Design
Static and Dynamic Systems
Robotic Sensing and Navigation
Industrial Robotics
Controls Engineering
Embedded Systems