



# 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

### 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 • GitHub •  
Visual Studio • Unity3D

### HARDWARE

Mechanical Analysis •  
Circuit Analysis •  
Soldering • Arduino

## ACCOLADES

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

## PROJECTS

### 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

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.

### SUMMON ME SOMETHING | SOLE PROGRAMMER

2016

- Randomly-generated object to adjective association puzzles for two players.
- Showcased at WPI's 'Touch Tomorrow' program for children to play.
- Went from idea to fully playable and polished end product in under 48 hours.

### WPI MAPPER | DEVELOPER TOOLS PROGRAMMER / PROJECT MANAGER

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.

### ROBOTIC FIREFIGHTER | MECHANICAL DESIGNER / PROGRAMMER

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

- Delivered exceptional customer service.
- Ran 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.