

# umersalman

## contact

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## programming

CSS3 & HTML5  
PHP (♥ Laravel)  
MySQL  
JavaScript, CoffeeScript  
jQuery  
Java, C++  
L<sup>A</sup>T<sub>E</sub>X (this résumé)  
Python  
TIBASIC  
Assembly  
MATLAB  
LabVIEW  
Git, SVN, Mercurial

## operating systems

Linux  
Android  
OS X  
iOS  
Windows

## software skills

Basic SolidWorks  
CyberLink PowerDirector  
Eclipse  
TableAU  
Android Studio  
Paint.NET

## education

2016–Now	<b>Electrical and Computer Engineering Class of 2020</b>	University of Texas at Austin
2013–2016	<b>High School at Texas Military Institute (TMI)</b>	TMI - The Episcopal School of Texas
2013	<b>Certification of Graduate-Level Course</b> Graduated an online course titled "Malicious Software and its Underground Economy: Two Sides to Every Story." Learned about traditional and mobile security threats and the ecosystem that drives that illegal, yet profitable, business	Royal Holloway University of London
2012–2013	<b>9<sup>th</sup> grade</b>	Saint Andrew's Episcopal School

## projects

2012–Now	<b>Android</b> Heavily involved in the Android development community <ul style="list-style-type: none"><li>• Software<ul style="list-style-type: none"><li>– Created ROMs for the HTC One X and OnePlus One (adb/fastboot)</li><li>– Named a Snapchat filter</li></ul></li><li>• Hardware<ul style="list-style-type: none"><li>– Built an IR blaster</li><li>– Created a wireless charger for HTC One X</li></ul></li></ul>	San Antonio, Texas
2016–Now	<b>Password Requirements</b> Currently writing a Chrome extension for crowdsourcing password requirement information	Austin, Texas
2017	<b>Smash Bros LaunchPad</b> Developed in C and Assembly, this adaptation of Smash Bros runs on a TI LaunchPad. Wrote LCD drivers, audio output control, joystick and button inputs. Wired inputs, display, audio jack, and vibration motor to board	Austin, Texas
2016	<b>Make Something Great Again</b> Inspired by Donald Trump's slogan and logo, I created makesomethinggreatagain.com	San Antonio, Texas
2016	<b>Bluetooth Speaker</b> Built a Bluetooth speaker for just under \$4	San Antonio, Texas
2016	<b>Waterslide</b> Right after graduation, my friends and I built a 12' tall waterslide in 2 days	Boerne, Texas
2015–2016	<b>Car Diagnostics Logger</b> Raspberry Pi in my glove compartment for logging my car's stats (intake temp, RPM, MPG, etc) every 1/4 second	San Antonio, Texas
2013	<b>Simple Source Viewer</b> Simple, easy to use app for Windows 8, RT, 8.1, and 10 to view the source code of a webpage	San Antonio, Texas
2013	<b>Chromecast</b> Discovered additional tools to expand the potential of the \$35 device. Findings were published on ReadWriteWeb, XDA Developers, and other tech sites	San Antonio, Texas
2013	<b>CygwinHere</b> Cygwin is a Windows CMD mod to bridge CMD and a Linux Terminal. My registry tweak ports over the "Open in Terminal" function	San Antonio, Texas
2012–2014	<b>ExtempEngine</b> Developed a Chrome App to automatically download and sort articles from news sources allowing easy access during an extemporaneous debate round without internet connection	San Antonio, Texas

## extracurriculars

2017–Now	<b>Texas Aerial Robotics (TAR)</b> Founded a club to compete in the International Aerial Robotics Competition with our fully autonomous quadcopter. Uses computer vision and multiple sensors to target and interact with moving ground robots. Placed 4 <sup>th</sup> in our first run	University of Texas at Austin
2016–Now	<b>IEEE-Communications Society (IEEE ComSoc)</b> Spread awareness about and prevention of software and hardware vulnerabilities	University of Texas at Austin
2016–Now	<b>Muslim Student Association (MSA)</b> Carry out religious, social, charitable, literary, athletic, scientific, research, and other Islamic activities	University of Texas at Austin
2016–Now	<b>Women in ECE (WECE)</b> Promote diversity, volunteer, and bring together all ECE students	University of Texas at Austin
2015–2016	<b>TMI Maker Club</b> Founded and manage a club where students can come together to make things or learn to make things, whether they be portable phone chargers, wood frames, or soldiering skills	TMI - The Episcopal School of Texas
2015–2016	<b>CyberPatriot</b> Ranked Platinum, the highest tier, in a National cybersecurity competition funded by Northrop Grumman Corp.	TMI - The Episcopal School of Texas
2014–2016	<b>Quiz Bowl</b> Compete with other schools in trivia in all academic subjects	TMI - The Episcopal School of Texas
2014–2016	<b>National Honors Society</b> Honors students who display excellence in scholarship, leadership, service, and character	TMI - The Episcopal School of Texas
2013–2016	<b>Varsity Soccer</b> District Champions in 2013	TMI - The Episcopal School of Texas
2013–2016	<b>TMI Science Club</b> Club in which we create science projects and visit science events around San Antonio	TMI - The Episcopal School of Texas
2014	<b>National Student Leadership Conference</b> Attended an Engineering summer camp at a university	Northwestern University
2013–2014	<b>Track and Field</b> Competed in 400m and 800m events at various Texas meets	TMI - The Episcopal School of Texas
2013	<b>Varsity Tennis</b> Primarily played doubles	Saint Andrew's Episcopal School
2012–2013	<b>Mississippi Science Bowl</b> Competed in trivia with schools across the state in various science subjects	Saint Andrew's Episcopal School
2012–2013	<b>Junior Varsity Soccer</b> Played starting midfielder	Saint Andrew's Episcopal School

# robotics

## 2014–2016 **FIRST Robotics Competition**

Brandeis High School

Build 120 lbs robots to compete against more than 3,000 teams from 19 countries. My team, 3481 BroncBotz, is 1 of 91 BETA teams chosen for robust design, programming skills, and performance on the field. Won awards including Motorola Quality Award (x3), GM Industrial Design Award, and Delphi Excellence in Engineering Award

- Team Captain
  - Selected due to skills, teamwork, and robotics knowledge
  - Ensure team performs well and does the best the team can
  - Teach newer teammates
- Head of Programming
  - Use Eclipse to program the robot using a C++/Lua hybrid
  - Test and report back to FIRST, WPI, and National Instruments regarding BETA software which includes
    - \* Open-sourcing all code
    - \* Ensuring all code is well commented
  - Teach younger teammates how to
    - \* Program in C++ using Eclipse IDE
    - \* Understand what the various toolchains and libraries are
    - \* Flash the roboRIO
  - Run system checks to ensure robot communicates with computer and controllers prior to a match
  - Create vision systems for the robot drivers
- Head of Scouting
  - Created an offline website for teammates to use for gathering statistics on other teams
  - Organize the data using spreadsheets, TableAU, and in house built programs
  - Create a "pick list" of robots to alliance with, based off quantitative and qualitative data, as well as the robots' compatibility with our own
- Team Lead in Design
  - Facilitate the design process to take all aspects of the competition tasks into consideration for the design
  - Manage the SVN repository containing the SolidWorks CAD files
- Team Lead in Build
  - Teach newer teammates to use power tools safely
  - Oversee that parts are fabricated according to the design

## 2013–2016 **FIRST Tech Challenge**

TMI - The Episcopal School of Texas

Build robots to compete against over 5,000 other teams from various countries. My team, 6221 Panther Bots Alpha, has ranked in the top 3% of teams worldwide, earning us a spot in the world championship

- Team Captain
  - Manage and organize the team's meetings and events
  - Act as a liaison between the school and the team
- Head of Programming
  - Use Java in Android Studio to program the robots
  - Teach the newer teammates how Android Studio and the ZTE Speed control system works
- Team Accomplishments
  - Featured on the FIRST Facebook page
  - Appeared on CBS
  - Recognized at city council and awarded certificate of congratulations by mayor
  - Invited to display at Austin Mini Maker Faire

## awards

2015	<b>AP Scholar</b> Received due to high achievement on multiple AP tests	TMI - The Episcopal School of Texas
2015	<b>National Merit</b> National Merit Commended Student	TMI - The Episcopal School of Texas
2013–2014	<b>National Spanish Exam</b> Earned 2 Silver awards for Spanish proficiency	TMI - The Episcopal School of Texas
2013	<b>Erasmus Award</b> Awarded to the student that is most driven and most excited about learning	Saint Andrew's Episcopal School

## volunteering

2015–2016	<b>TeamUp! Challenge</b> Plan and teach a science curriculum about the history of the earth and biodiversity for local elementary schools through the San Antonio Spurs' "Silver and Black Give Back" program	San Antonio, Texas
2014–2016	<b>HACKERS, Inc.</b> Teach LEGO Mindstorms robotics at a nonprofit camp for elementary and middle schoolers	San Antonio, Texas
2015	<b>Northside Tech Expo</b> Present our FIRST Robotics Competition robot to Northside ISD students and parents to let them see what STEM programs are available to them	San Antonio, Texas
2014	<b>Austin Mini Maker Faire</b> Showed our FIRST Tech Challenge robots to the public to get them interested about robotics	Austin, Texas
2013	<b>National Museum of Nuclear Science</b> Hosted "Dynamics of Flight" exhibit <ul style="list-style-type: none"> <li>• Ran the flight simulators</li> <li>• Taught visitors about the history and science of everything nuclear</li> <li>• Explained to children the way different planes work</li> </ul>	Albuquerque, New Mexico
2013	<b>Albuquerque Presbyterian Hospital</b> Volunteered at childlife and children's cancer centers, which sought to minimize stress and help children and their families cope with their healthcare experience	Albuquerque, New Mexico
2013	<b>New Mexico Food Bank</b> Distributed food and other items to various charities	Albuquerque, New Mexico
2012	<b>Operation Soccerstring</b> Taught 1 <sup>st</sup> and 2 <sup>nd</sup> graders soccer and arts and crafts	Jackson, Mississippi
2012	<b>Our Daily Bread</b> Packaged food for families in need	Jackson, Mississippi
2012	<b>Operation Shoestring</b> Organized school for poverty-stricken children	Jackson, Mississippi

## speech and debate

- 2012–2013 **Policy (CX) Debate** Saint Andrew's Episcopal School  
An extremely fast paced, evidence-based debate to analyze potential federal government plans
- Qualified and competed at NCFL Nationals
  - Competed at colleges, including Harvard and Mississippi State
  - Won 2<sup>nd</sup> in state
- 2012–2013 **International Extemporaneous** Saint Andrew's Episcopal School  
Prepared and delivered 7 minute speeches regarding international affairs. Ranked highly at every competition
- 2012–2013 **Congress** Saint Andrew's Episcopal School  
Competed in mock Congressional debate
- 2012–2013 **Degree of Distinction** Saint Andrew's Episcopal School  
Awarded due to consistently ranking highly in competition. Ranks above Degree of Merit, Degree of Honor, and Degree of Excellence

## experience

2012–Now	<b>Ingress (Niantic, Inc.)</b> <i>Regional Moderator</i> Ingress is a game made by Google where the entire world is the playing field shared by 2 teams. Thus, coordination on a global scale must occur <ul style="list-style-type: none"> <li>• Created and manage the South Texas roster website and database <ul style="list-style-type: none"> <li>– satxresist.com</li> </ul> </li> <li>• Improved the usability of Google’s web app by JavaScript bookmarklets for thousands of users <ul style="list-style-type: none"> <li>– Including a mobile version that receives 33k visits a year</li> </ul> </li> <li>• Manage cross-team affairs to ensure safe play for all</li> <li>• Oversee operations that span multiple continents</li> <li>• Directly communicate with hundreds of others to facilitate operations</li> </ul>	
2011–Now	<b>Socialcu.be</b> <i>Developer, Moderator</i> Moderate a social networking platform that is home to over 2,000 users	
2017	<b>General Dynamics Mission Systems</b> <i>Cybersecurity Intern</i> <ul style="list-style-type: none"> <li>• Worked on PitBull and TNE development and management tools <ul style="list-style-type: none"> <li>– PitBull is a Multilevel Security (MLS) Linux Operating System based on Red Hat Enterprise Linux</li> <li>– Trusted Network Environment (TNE) is built on top of PitBull and shipped to U.S. Department of Defense and Federal Agencies for handling operations and information at any security level</li> </ul> </li> <li>• Created PitBull Health Console/LogViewer <ul style="list-style-type: none"> <li>– Reduces time to diagnose system problems</li> <li>– Analyze multiple machines in one session</li> </ul> </li> <li>• Developed PitBull/TNE testing tools <ul style="list-style-type: none"> <li>– Tests through operating system tasks to ensure successful integration</li> <li>– Can run headless or be configured to run specific tests</li> </ul> </li> </ul>	San Antonio, Texas
2016	<b>TMI Paths of Life</b> Created a 50 page whitepaper for students at my school to find the best colleges and jobs for their futures	TMI - The Episcopal School of Texas
2015	<b>Parlevel Systems</b> <i>Summer Intern</i> <ul style="list-style-type: none"> <li>• Worked on the development of analytical software for vending machine operators in North America</li> <li>• Developed the company’s foray into micromarkets <ul style="list-style-type: none"> <li>– Generates roughly \$50/day per location</li> <li>– In use at Rackspace/Geekdom</li> </ul> </li> <li>• Created web tools to allow the company itself to run more efficiently</li> </ul>	San Antonio, Texas
2014	<b>Tots N Teens Pediatric Urgent Care</b> <i>Logo Creator and Website Manager</i> Created the logo for a local urgent care clinic	San Antonio, Texas
2014	<b>Umer936</b> <i>Website Builder</i> Built professional websites for businesses and clients by employing web development skills	San Antonio, Texas

## skills and interests

**professional:** coding, programming, creating, web design, web app creation, software design, building, wiring, computer software, tech

**personal:** puzzles, math, listening to others (7cupsoftea.com), typography, computer hardware, reading (science, mystery)

## references

### **Mr. Rafael Barroso**

*Parlevel Systems, CIO & Co-Founder*  
Worked under him during internship  
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### **Mr. Michael Blake**

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Head coach for my FIRST Robotics Competition team  
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### **Mr. James Lewey**

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