

## Zach Tang

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### EDUCATION

<b>Courses:</b>	<b>Texas</b>
<b>Junior year</b>	<b>Academy of Math and Science at UNT</b>
<ul style="list-style-type: none"><li>• Multivariable Calculus</li><li>• Computer Science 1</li><li>• Computer Science 2</li><li>• Linear Algebra</li><li>• Differential Equations</li></ul>	<b>August 2019 - Present</b>
<b>Freshman/Sophomore year</b>	<b>Jasper Highschool</b>
<ul style="list-style-type: none"><li>• AP Computer Science Principles (AP Score 5)</li><li>• AP Calculus BC (AP Score 5)</li><li>• Honors Pre-Calculus</li><li>• Professional Communications</li></ul>	<b>August 2017- June 2019</b>

### ORGANIZATIONS

<b>Robotics Club Member</b>	<b>August 2018 - June 2019</b>
<ul style="list-style-type: none"><li>• Helped with design and engineering of the Jasper Highschool robot for FTC competitions 2018-2019</li></ul>	
<b>Plano West Cross Country and Track Member</b>	<b>August 2017 - June 2019</b>
<ul style="list-style-type: none"><li>• Daily, early morning training with the rest of the Plano West team members to prepare for Cross Country and Track season</li></ul>	
<b>TAMS Sports Club Member</b>	<b>August 2019 - Present</b>
<ul style="list-style-type: none"><li>• Participate in sports, specifically Ultimate Frisbee, and work to improve the sports team's ability and teamwork to prepare for the SLAMT tournament</li></ul>	
<b>TAMS Elm Fork Committee Member</b>	<b>August 2019 - Present</b>
<ul style="list-style-type: none"><li>• Direct kids in fields trips which engage them in science and math</li></ul>	
<b>TAMS Mu Alpha Theta Volunteering Member</b>	<b>August 2019 - Present</b>
<ul style="list-style-type: none"><li>• Tutor Sam Houston Elementary kids in 4th and 5th grade in math subjects</li></ul>	
<b>TAMS Computer Science Organization Volunteering Member</b>	<b>August 2019 - Present</b>
<ul style="list-style-type: none"><li>• Solve technical problems residents of the Good Samaritan Society have</li></ul>	
<b>TAMS SciOly Team Member</b>	<b>Jan 2020 - Present</b>
<ul style="list-style-type: none"><li>• Compete in Science Olympiad competitions such as Louisiana Tech Invitational</li></ul>	
<b>TAMS VIBE Member</b>	<b>Jan 2020 - Present</b>
<ul style="list-style-type: none"><li>• Weekly dance practice to prepare for dance performances for TAMS social events</li></ul>	

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### LittleDOCC (Open Coffee Club) Member

- Meetup every other Tuesday at a coffee shop in Denton to talk about the latest in technology, startups, lifestyle, and business

Jan 2020 -  
Present

## PROJECTS

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### Package Delivery Menu (C++)

Calculates the cost for a delivery of a package based on travel type and location of the start and end destination from user input.

- Worked with loops and conditionals to make sure the user input was valid information

### Anthony's Battle (C++ game)

Anthony the ant wants to take over hidden colonies, with his army of ants, that are laid out over a board. Help Anthony find the location of every colony on the board!

- Created multiple functions to affect a 2D matrix, which stores the info of the game board, based on user input

### Tic Tac Toe (HTML/Javascript game)

Classic Tic Tac Toe game

- Worked with event handlers, such as onclick, to simulate the action of choosing a position in Tic Tac Toe

### Systems of Equations Solver (HTML/Javascript)

Solves a system of 3 equations using the Gaussian Elimination algorithm drilled into me by the professor of my Linear Algebra course

- Created multiple functions to replicate the algorithm on a 2D matrix representation of the system of equations given from user input

### Smart Route (Flutter/Dart, Hack SMU II 3rd place overall, 3rd place State Farm)

Chooses safest route to a given destination based on metrics taken from real-time weather API

- Styled user interface using Flutter
- Sent HTTP requests to gather real-time weather information from the Darksy API
- Worked on the functions that took the data from the Darksy API to determine the safest route to a destination

### Song Filter (HTML/Javascript)

Filters out songs based on genre selected by a user

- Used query strings to get the genres the user selected
- With the genres selected data, I filtered songs with matching genre attributes to the selected genres