Projects:

1. **Busses of Austin Rating System (BARS)**: An app that helps Austin commuters rate their travel experience on public transport, helping others to plan their trip as well as creating a dataset for the Austin Metro Department to analyze and determine avenues of growth.
   1. Technologies used:
      1. Python BeautifulSoup, Pandas: scraping [X MB] of data on Austin bus routes and stops
      2. Google Geofences API: Location-based services
      3. AndroidStudio
   2. Tags: fun, service
2. **IBM and Sahana Eden**: Analyzed 10 years of call history from the Thornwood FD (link) to recommend new policies.
   1. Tech used:
      1. IBM Bluemix: Set up a server to host the Sahana Eden platform.
      2. Python BeautifuSoup, Pandas: Scraped and cleaned 10 years of call history.
      3. Tableau: Geolocation-based analystics, chi-squared goodness of fit models.
   2. Tags: analytics
3. FTC Scouting System: Developed a data collection and analysis system to determine alliance partners and track robot design progress.
   1. Tech used:
      1. Tableau: Visualize robot capabilities to quickly determine optimal alliance partners.
   2. Tags: robotics, analytics
4. Teamquadx.org: Fully custom website for robotics team that averages 300 visits a month during the season.
   1. Tech used:
      1. HTML, CSS, and Javascript
      2. Materialize: Google’s CSS framework.
   2. Tags: robotics
5. **SACOT map**: Visualize the current state of funding for each US state and links users to resources to contact their local representative.
   1. Tech used:
      1. GIS: Project information onto a map of the US.
   2. Tags: robotics, service
6. Banana Bot: A twitter bot that regularly posts facts about bananas.
   1. Tech used:
      1. AWS: hosting the script to ensure nobody ever misses a banana fact.
      2. Twitter API
      3. Python
   2. Tags: fun
7. **STEM Workshop Curriculum**: 20 hours of curriculum for teaching elementary to middle school students the basic of 3D modelling, web development, GIS, and design thinking.
   1. Tech used:
      1. TinkerCAD
      2. Makerbot 3000: Modelled and 3D printed fidget spinners for the students.
   2. Tags: service, code

Other content: Extended resume

* 1-paged resume
* Mentions
  + Latinitas magazine
  + There something about Dean’s List?
  + Something about robotics with a mention
* Links
  + LinkedIn
  + GitHub
  + Email (98)
* Current projects: (tag = current)
  + Cornell Campus-Wide Gift Exchange: Develop a system to match Cornell students in a gift exchange.
    - Tech used:
      * SQL?
      * Node.js?
* Causes I’m passionate about:
  + Making STEM accessible to everyone.
  + Using tech ethically to improve quality of life.

Me: Create a society where cutting-edge technology benefits everyone instead of creating further disparities between the haves and the have-nots.

I’m an Austinite studying Engineering Physics at Cornell University in Ithaca, New York. I enjoy solving problems that I know can have an impact on the “real world”- the bigger the scope of the problem and the less defined it is, the better. This drive is supported by my ability to pick up on patterns across topics, and then drill down until I find the root cause of the relation.

I’m a fan of almost every STEM field, but my main interests are:

* Big data, machine learning, and analytics. We’re entering an age where we’ll know more and more about the members of society. I want to help make it a prosperous one.
* Advanced computing methods. To reach its full potential, the field of data science will need to be supported by increasing computing capabilities.

The problems I want to solve with these tools include:

* Promoting social equality. Everyone should access to what they need to be comfortable. Period.
* Guaranteeing universal tech literacy. For everyone to have this chance at comfort, they need to know how to navigate the increasingly technical world.

None of my interests exist in isolation. Big data and machine learning and technology in general have an incredible opportunity to do good. Our best shot at ensuring this is to make sure any advancement benefits everyone instead of creating greater gaps between the tech elite and the tech illiterate.

# June 17 Edits

I’m an Austinite studying Computer Science at Cornell University, optimistically minoring in Physics.

I love the breadth of skills that go into data science as well as the variety of its applications, which is why I serve as both the Insights Subteam Lead and Recruitment Chair for Cornell Data Science.

My main interests are interpretable machine learning and data visualization, embedded and operating systems, and if I can ever learn enough physics, quantum computing. All these interests can only be of use if everyone can benefit from them, which is why I am also passionate about promoting tech literacy and using technology for social impact.

Outside of school I’ve enjoyed learning to cook while working at Microsoft, I try my best to swim on a weekly basis, and I inevitably spend a lot of time watching YouTube videos.

How to make not pretentious: back up every line with a thing.

* Insights Subteam Lead: Insights github page
* Machine learning and data vis: Fake New
* Embedded: add theremin to public github
* Quantum: maybe find old research paper from YYGS?
* Tech literacy: tech chicas
* Tech for social: Busses of Austin, or something better/ link to my service tag
* Microsoft: GrOwTh MiNdSeT

Possible Pictures:

* Ice cream
  + Vibe = fun, cutesy quirky
  + NASA shirt
* Rock
  + Vibe = a little more edgy, active

Experience:

* Cornell Data Science: Insights Lead
  + Spring 2019: Developed CNNS and Siamese RNNs to classify fake news, with an improvement of 10%
  + over baseline.
  + Fall 2018: Researched and developed a new method to visualize how a CNN is trained.
  + Spring 2017: Analyzed the structure of knowledge on Wikipedia using Markov Models and NLP methods.
  + As a founding member of the sub team, personally recruited, trained, and lead 15 members.
* Microsoft: Intern
  + Designing and implementing features to enhance the end user experience in Windows Virtual Desktop.
* IBM: Research Intern
  + Developed a full-stack web application to visualize geospatial data using Flask and REST APIs. Work is now being used in research on visualizing big data.
  + Built models for anomaly detection in 100GB of time series data using Spark and scalable ML.

Education

Relevant Courses:

* Core: Algorithms, Data Structures, Embedded Systems, Function Programming
* Interests: Machine Learning, Data-Driven Web Apps, Manifolds
* Physics: Honors Mechanics, E&M, Waves
* Fun: Intermediate Ski, Large Boat Sailing

Skills:

* Programming Languages: Python, Java, OCaml, D3.js, C, C++
* Technical Skills: Bash, Hadoop/Spark, Git, REST APIs
* Key Skills: Project management, analytics, agile development

Projects

* Get rid of space invaders
* Cards Against Humanity OCaml?
  + Code Tag
  + Wrote the interface and game mechanics for Cards Against Humanity, as well as an AI to play against when you don’t have any friends.
  + Tech Used: OCaml
* Theremin
  + Code Tag
  + Built a theremin, an instrument where you vary the pitch and volume by changing the position of your hands in relation to a sensor (check out a video here).
  + Tech Used: C, FRDM-K64F board
* WikInsights
  + Tag: Data Science
  + Scraped Wikipedia to create a graph structure to model topics and their relations, then ran a constrained Random Walk to create a “path of learning.”
  + Tech Used: Python, Markov Chains, TF-IDF scoring, K-means cluster, web scraping
* CNNViz
  + Tag: Data Science
  + Capture the activations at each layer of a CNN over epochs, project onto 2D space using T-SNE, then align projections to model the “path” the activations take while training.
  + Tech Used: Python, Tensorflow, CNNs, d3.js
* Fake News
  + Created a Siamese RNN Network to classify headline/body pairs as agreeing, disagree, or neutral in stance, then built a visualization to compare the two branches and help in diagnosing the model and finding trends when training.
  + Tech Used: Python, Pytorch, RNNs, d3.js