

PARTH SAREEN

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SKILLS

Languages: Python, Scala, C++, C, Go, Java, Objective-C, Rust, JavaScript, SQL, GraphQL

Tools & Frameworks: AWS, GCP, Kubernetes, Docker, Akka, Kafka, gRPC, Protobuf, Jenkins, Grafana, PostgreSQL, Neo4j

EXPERIENCE

- Product Management Intern, Siri Accuracy | Apple | Cupertino, California** Sep 2021 - Present
- Led project for identifying churn and conversion for Siri users and gained buy-in from 3 different global team leads.
 - Analyzed data with Python, Jupyter, and Latent Dirichlet allocation to prove the project hypothesis.
 - Leveraged Spark and Presto to conduct ad-hoc analysis to identify common characteristics in Siri users.
- Software Engineering Intern, Siri ASR | Apple | Cupertino, California** Jan - Apr 2021
- Architected and built modular systems in C++, Objective-C and Python using OOP for Siri's ability to understand speech.
 - Project managed and tech-led a new framework for Siri involving 3 engineering teams expected to launch at WWDC '22.
 - Collaborated with multiple teams and data scientists to bring [on-device machine learning](#) models to production.
 - Exceeded end-to-end runtime goal by 5x for the audio ML pipeline to run at 20x real-time by optimizing vectorizing code.
- Software Engineering Intern, Energy Products | Tesla | Palo Alto, California** May - Aug 2020
- Designed and created services with Scala, Akka and Func. Prog. for distributed IoT systems to enable [Virtual Power Plant](#).
 - Implemented a scalable gRPC microservice to integrate into [Autobidder](#) for the UK launch of the product.
 - Worked cross-functionally with various teams to create production-level APIs to support the launch of [Solar Inverter](#).
 - Redesigned and added linear scalability for a hardware pub-sub microservice with Kubernetes to increase reliability.
- Technical Product Manager (Part-time) | Pronti | Toronto, Ontario** May 2020 - Present
- Architected backend and ML system with Python, PostgreSQL, Lambda, Kubernetes, and SNS on AWS for the [iOS app](#).
 - Managed 7 developers, led sprint planning, design reviews and established various engineering processes.
- Machine Learning Engineering Intern | Deloitte | Waterloo, Ontario** Sep - Dec 2019
- Developed an end-to-end dynamic faceted search engine to save Tax Practitioners ~10 hours/week using Python, Flask, Neo4j (Graph DB), Natural Language Processing, Tensorflow, Keras, AWS, Docker and Kubernetes.
 - Leveraged LDA, word embeddings, clustering and other NLP techniques to preprocess and cluster 1000+ documents.
- Software Engineering Intern | Ritual | Toronto, Ontario** Jan - Apr 2019
- Automated bug tracking and analytics with Python, Bash and GCP to save 30 minutes every day for the QA team.
- IoT Developer Intern | SAP Labs | Toronto, Ontario** Jul - Aug 2018
- Developed a smart office monitoring system with Arduino ESP8266 and C++ by reading various types of sensor data.

EDUCATION

University of Waterloo

Mechatronics Engineering, BAsc | GPA 3.7/4 | Dean's Honours List Fall 2020

Sep 2018 - Apr 2023

Relevant Courses: Data Structures and Algorithms, Real-Time Systems, Microprocessors, Calculus

Extracurriculars: Tron '23 Class Representative, Engineering Society Commissioner, Tech+ Mentor, Tron Mentor Chats

INTERESTS & ACTIVITIES

Muay Thai, Guitar, Singing, Distributed Systems, Product, Machine Learning, Clean Tech, Avatar the Last Airbender

PARTH SAREEN PORTFOLIO

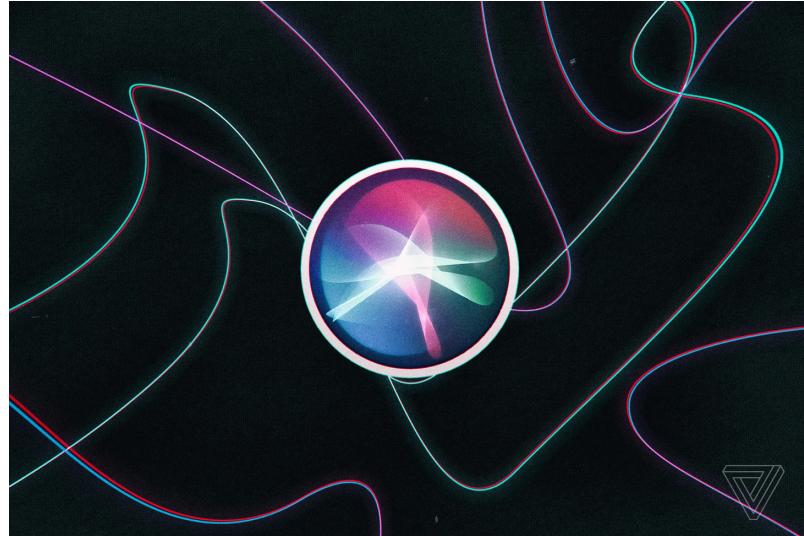
A collection of work experiences and
projects.

RELEVANT WORK

You might have seen the most recent WWDC and seen some of my team's work with on-device speech recognition. I got to work on a new feature that expands on what was showcased. It was a really cool experience as I got to lead the project end-to-end and work with extremely smart engineers and data scientists. I also finished my internship with an internal build released for teams within the AI/ML organization and a presentation for various directors and engineers within Siri. I hope to expand my product thinking so that I can lead engineering teams as a product-minded engineer in my current PM internship at Apple

Verge article covering on-device Siri:

bit.ly/siri-od



During my internship at Tesla, I worked on multiple projects and took on tasks as they came into priority. My main projects were: adding scalability and reliability to a core microservice, Autobidder UK launch and Solar Inverter launch. Since this was my first "big" internship there was a lot of ramp-up with new technologies, workflows and coding practices. This internship prepared me to work on the level of a full-time engineer by having ownership of multiple projects and working on them concurrently.

Autobidder UK Launch: bit.ly/auto-uk-launch

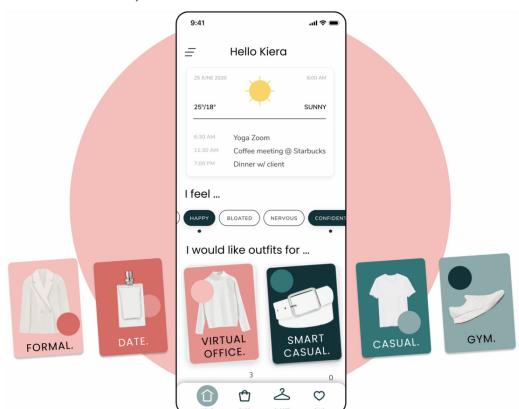
Solar Inverter Launch: bit.ly/tesla-solar-inverter



I've been working at Pronti for a little over a year as a consulting TPM. I designed a lot of the initial infrastructure which supports the app and led different engineering teams' app development cycles. It's taught me how to lead teams and empathize with engineers and consumers to have a well-made application.

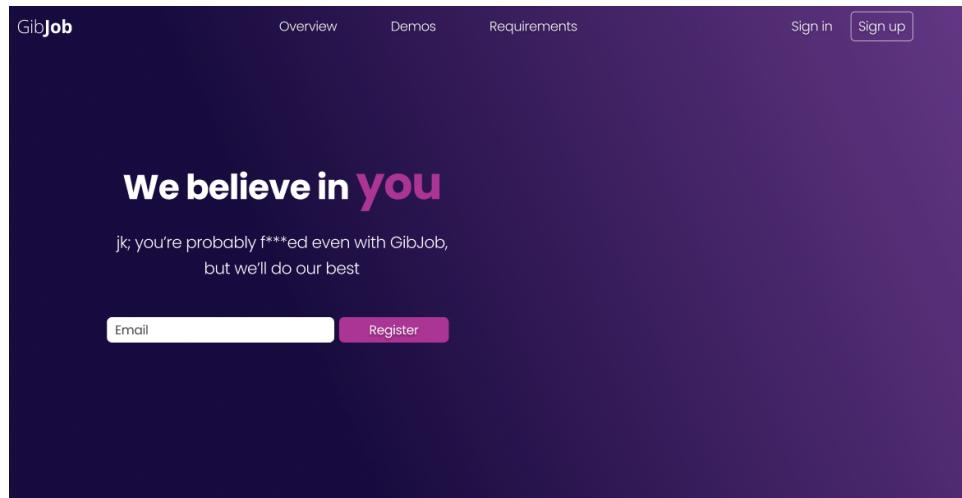
On the App Store: bit.ly/pronti-app

PRONTI gives you suggestions on what-to-wear based on your closet items, choices, and mood.



RELEVANT PROJECTS

GIBJOB



GibJob is a tool to help with applying to jobs on WaterlooWorks (how most Waterloo students apply and find a coop position), and also help customize a resume with drag and drop.

Currently working on it with my friends! The stack is Go, PostgreSQL, GraphQL, GCP, SvelteJS.

QUICKAPPLY

QuickApply is a tool I wrote for myself which allowed me to apply to 100s of jobs with a single click of a button. Nothing fancy, just some Python with Selenium and a lot of hours saved :)

SPOTME

```
is_local: false
name: Rigamortus
popularity: 64
preview_url: https://p.scdn.co/mp3-
  preview/66bc9fbd7971dca5018b9d7a5472e69faa7ea42d
  ?cid=2feb4729ba5145d7a7fd92f2af83cf0d
track_number: 11
type: track
uri: spotify:track:2lD6AoA8qf2t4Dkf2TcmNK
▼1 {2}
  added_at: 2019-12-05T14:52:14Z
  ▼track {17}
    ▶album {13}
    ▶artists [2]
    ▶available_markets [79]
    disc_number: 1
    duration_ms: 254999
    explicit: false
    ▶external_ids {}
    ▶external_urls {1}
    href:
      https://api.spotify.com/v1/tracks/6PYnUsNEpYC7A4BS2sjw3L
      id: 6PYnUsNEpYC7A4BS2sjw3L
      is_local: false
      name: Right Back (feat. A Boogie Wit Da Hoodie)
      popularity: 77
      preview_url: https://p.scdn.co/mp3-
```

| | |
|---------------------------|--|
| First Name * | Parth |
| Last Name * | Sareen |
| Email * | me@parthsareen.com |
| Phone | 6475490610 |
| Location (City) * | Waterloo, Ontario, Canada |
| Locate me | |
| Resume/CV * | Attach , Dropbox , Google Drive , Pastebin |
| Cover Letter | Attach , Dropbox , Google Drive , Pastebin |
| LinkedIn Profile * | https://www.linkedin.com/in/parthsareen/ |

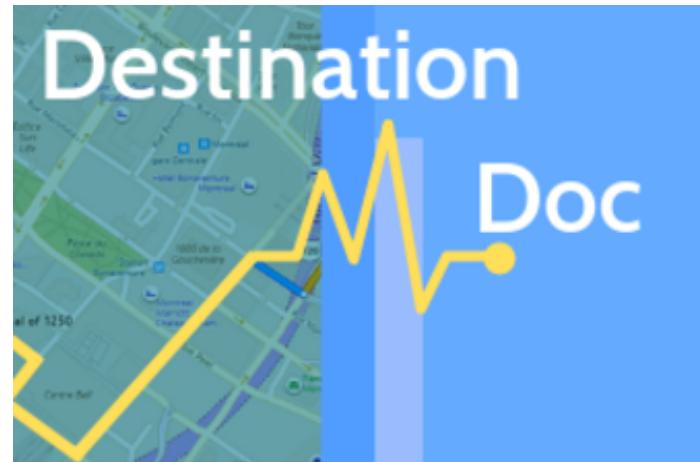
(Filled with the tool!)

I love listening to music and a lot of it! Rap, R&B, Hindi, Rock, you name it! I would find it hard to mix it up sometimes so I wrote a script, deployed it as a serverless function to create new playlists for me daily. It was written with Node.js and Axios.

DESTINATION DOC

My friends and I built this at McHacks (where we won the **Microsoft Azure Prize**). This was one of my first experiences with backend development and deployments!

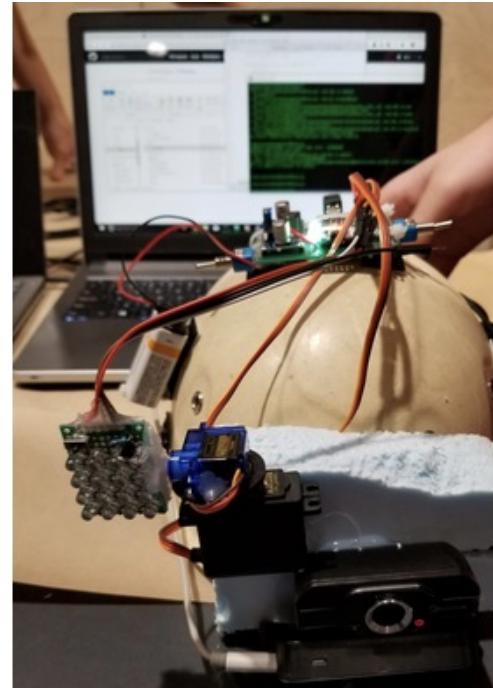
The goal of the project was to help with doctor wait times. Someone could search how long a trip to the doctor would take and we'd estimate the total time by using the maps API, Cisco API for their cameras and Twilio to let the user know of the time to reach the office. The stack was Python, Flask and Azure.



SMART LAMP

My friends and I made a smart hardhat for the UltraHacks hackathon. It was so that engineers and rescuers working in dark places could easily use high-powered LED lights without blinding other people. We came in **Second Place** and won the **Leap Motion Prize!**

We worked with Python, OpenCV, Arduino, LeapMotion and a RaspberryPi. The LeapMotion could sense the hands of the user and through the python interface, turn the LEDs to the user's hands. In case the camera also saw someone, the LEDs would automatically dim.



DEEP WEIGH

When I was getting my hands dirty with machine learning and deep learning, I reworked some tutorial code into my own project where I used my historic weight data collected through my Fitbit and an RNN to predict my future weight.

I learned a lot through the process of experimentation and also compared the model to an ARIMA-based time series forecast and compare the results of the two. Used Python and Keras for the project.

```
# Initialising the RNN
regressor = Sequential()

# Adding the first LSTM layer and some Dr
regressor.add(LSTM(units = 50, return_seq
regressor.add(Dropout(0.2))

# Adding a second LSTM layer and some Dro
regressor.add(LSTM(units = 50, return_seq
regressor.add(Dropout(0.2))

# Adding a third LSTM layer and some Drop
regressor.add(LSTM(units = 50, return_seq
regressor.add(Dropout(0.2))

# Adding a fourth LSTM layer and some Dro
regressor.add(LSTM(units = 50))
regressor.add(Dropout(0.2))
```