SENSE

We exist to protect our environment. Sense monitors local forests using machine learning, temperature, humidity detectors to alert dangerous situations. It provides a peace of mind that you and your forests are safe.

Team 5: Alice Kim, Irene Chung, Angela Dai, and Jessica Jiang

Agenda

SENSE

1. Introduction
2. Identified Problem
3. Product Concept
4. Personas
5. Product Demo
6. Demo
7. Next Steps
8. Questions

Identified Problem

804

total B.C. wildfires in 2019

Identified Problem

804

2019 total wildfires in B.C.

32.5 Billion tons

Total global CO_2 emissions

Identified Problem

804

2019 total wildfires in B.C.

32.5

Billion tons

Total global CO_2 emissions

30%

of greenhouse gas emissions are caused by wildfires

Product Concept

SENSE

Key Features

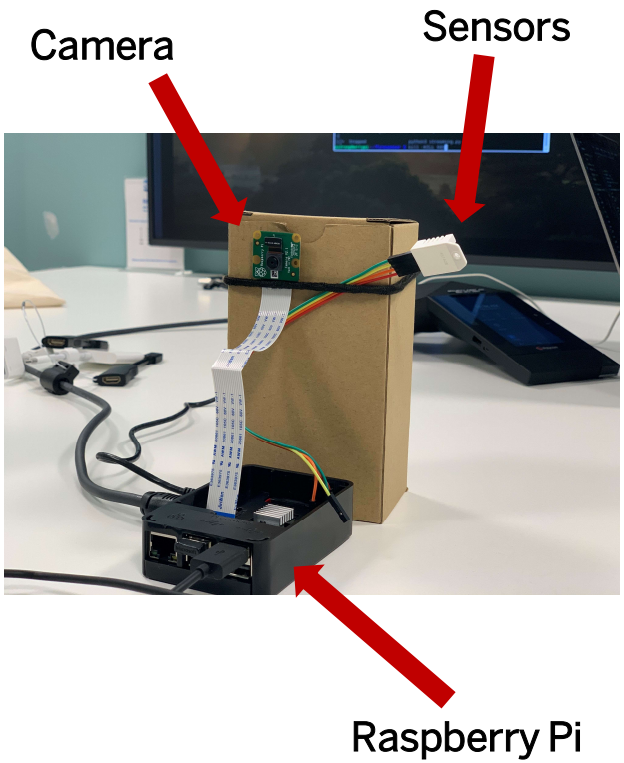
Temperature Sensor

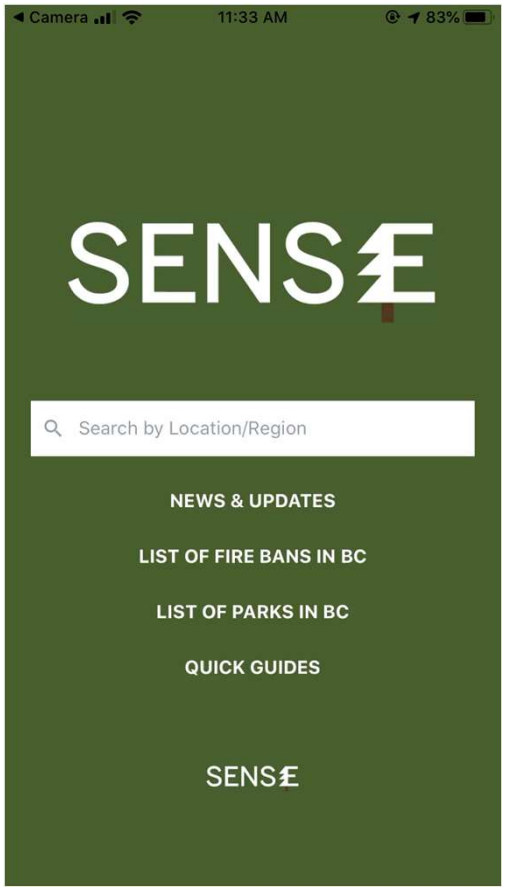
Humidity Sensor

Machine Learning to visually detect fires

User-friendly app

High-level dashboard





Personas

SENSE

Opportunity identified between 2 user groups

Jack

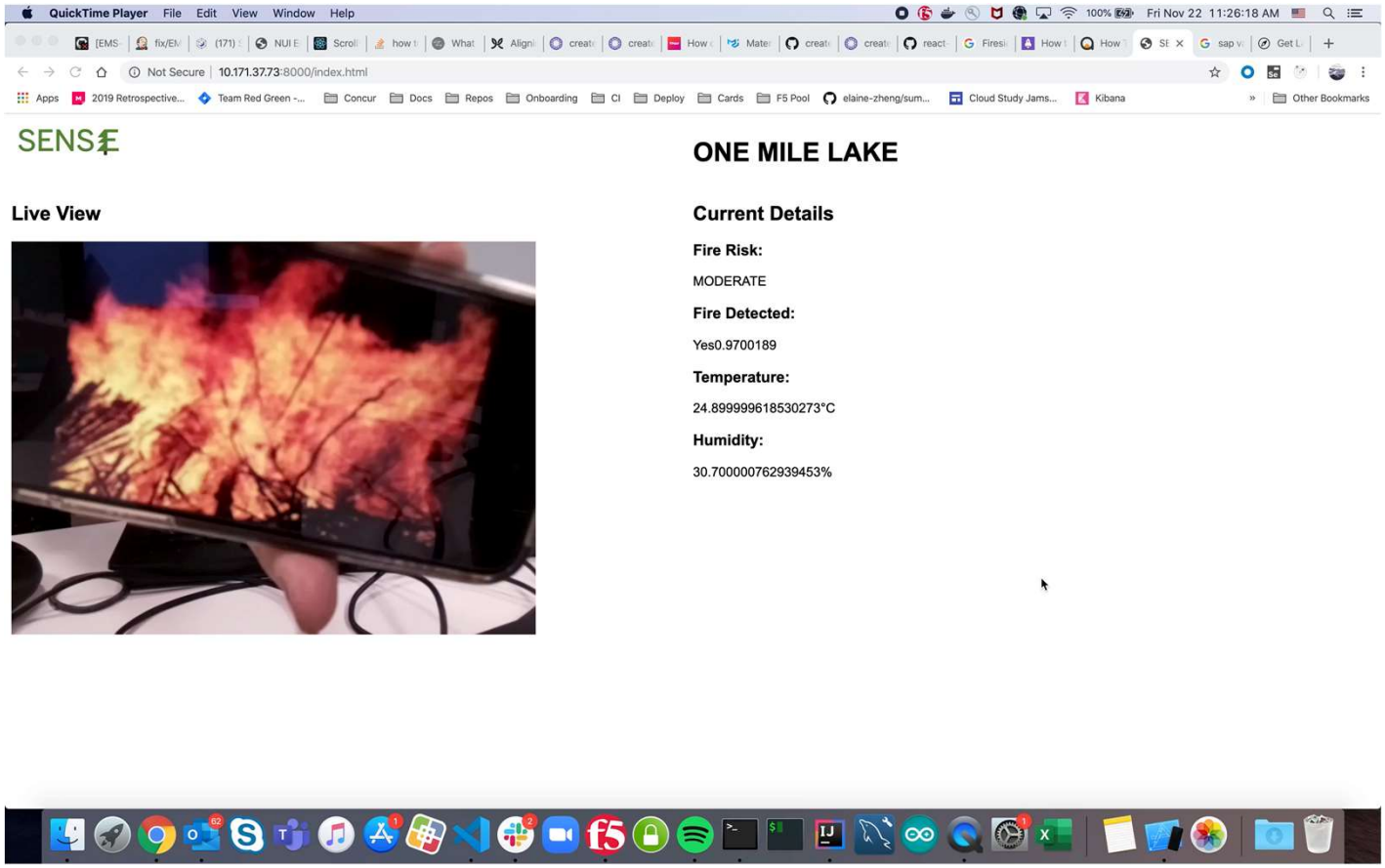
- Volunteer firefighter at BC Wildfire Services
- Works at a provincial park on the side
- Is concerned with his safety

Jill

- Outdoorsy
- Goes camping & enjoys campfires
- Lives near a large forest
- Values safety
- Has a 3 children
- Brand new house

Product Demo

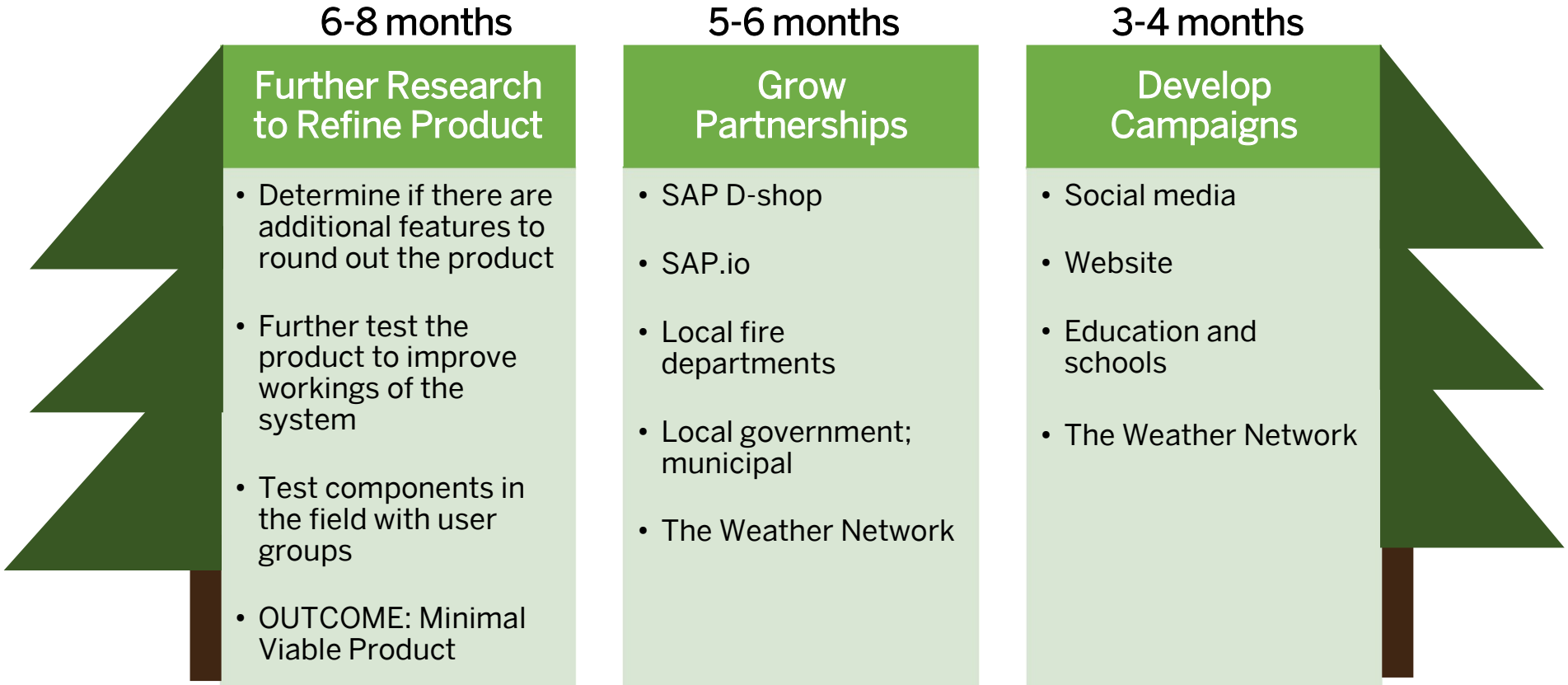
Dashboard Demo



Introduction | Identified Problem | Product Concept | Personas | Product Demo | **Demo** | Next Steps | Q & A

Next Steps: Implementation

SENSE



SENSE

We exist to protect our environment. Sense monitors local forests using machine learning, temperature, humidity, smoke detectors to alert dangerous situations. It provides a peace of mind that you and your forests are safe.

Questions?


Introduction
Identified Problem
Product Concept
Personas
Product Demo
UI Demo
Next Steps
Q & A

Thank You.


Introduction
Identified Problem
Product Concept
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Next Steps
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Appendix

1. Financials
2. Research Sources
3. Tech Stack

Appendix - Financials

Prototype Costs for one SENSE sensor

Item	Pricing	
Camera	$30.98 CDN on Amazon	Link
Raspberry Pi	$94.66 CDN on Amazon	Link
DHT 22 Sensor	$11.68 CDN on Amazon	Link
Total (before taxes)	$137.32 CDN	

Appendix – Research Sources

http://bcfireinfo.for.gov.bc.ca/hprScripts/WildfireNews/Statistics.asp

https://www.bbc.co.uk/news/science-environment-46212844

https://www.livescience.com/37743-greenhouse-effect.html

https://www.theguardian.com/environment/2019/jul/20/death-broken-livelihoods-farmers-wildfires-british-columbia

Appendix – Tech Stack

Hardware
Raspberry Pi
DHT22 Temperature and Humidity Sensor
Raspberry Pi Camera

Software
Python
Javascript
HTML

APIs
Teachable Machine
TensorFlow Lite
Adafruit Python DHT
Pi Camera