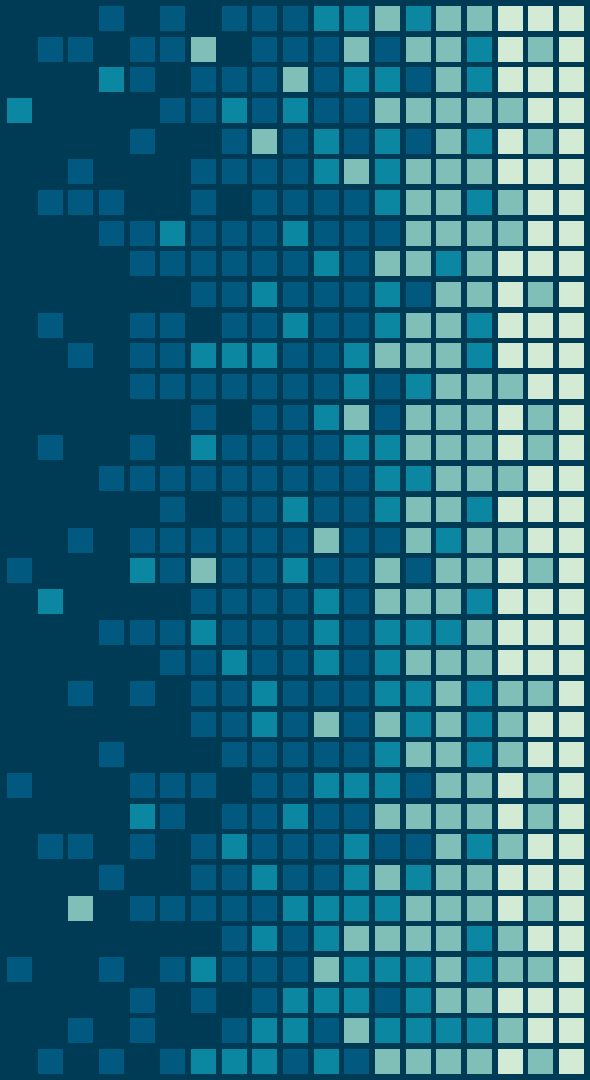
Proposal Presentation

Firmware

Spring 2018



Ryan Li

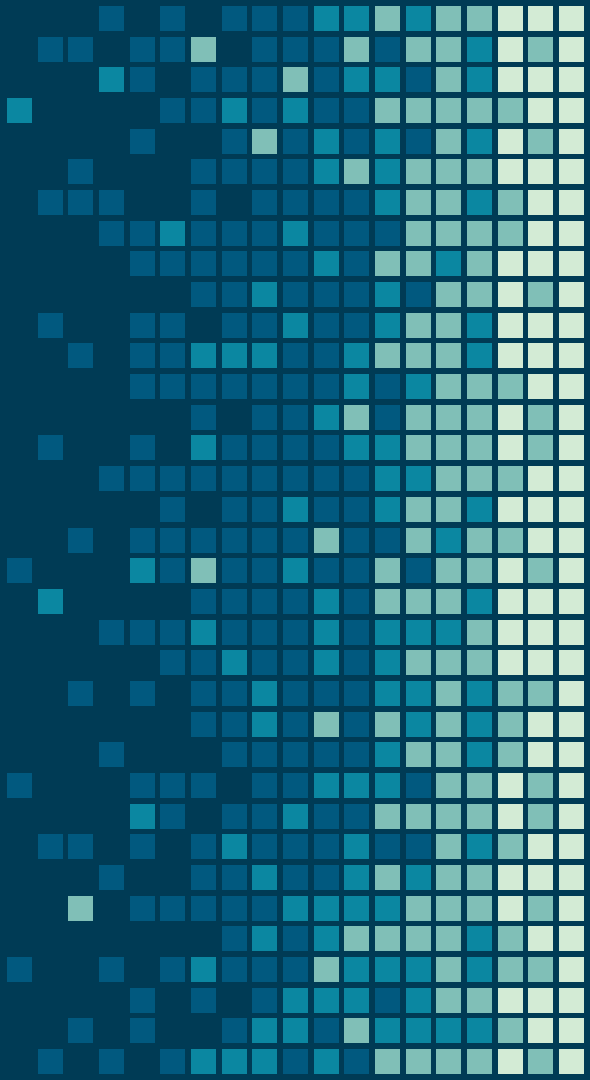
Standing: Sophomore
Major/Track: Electrical Engineer/ Electrophysics
EE396

Kylie Lin

Standing: Junior
Major/Track: Computer Engineer
EE396

Kevin Liu

Standing: Sophomore
Major/Track: Computer Engineer
EE396



Jonathan Tu

Standing: Sophomore
Major/Track: Electrical Engineer - Electrophysics
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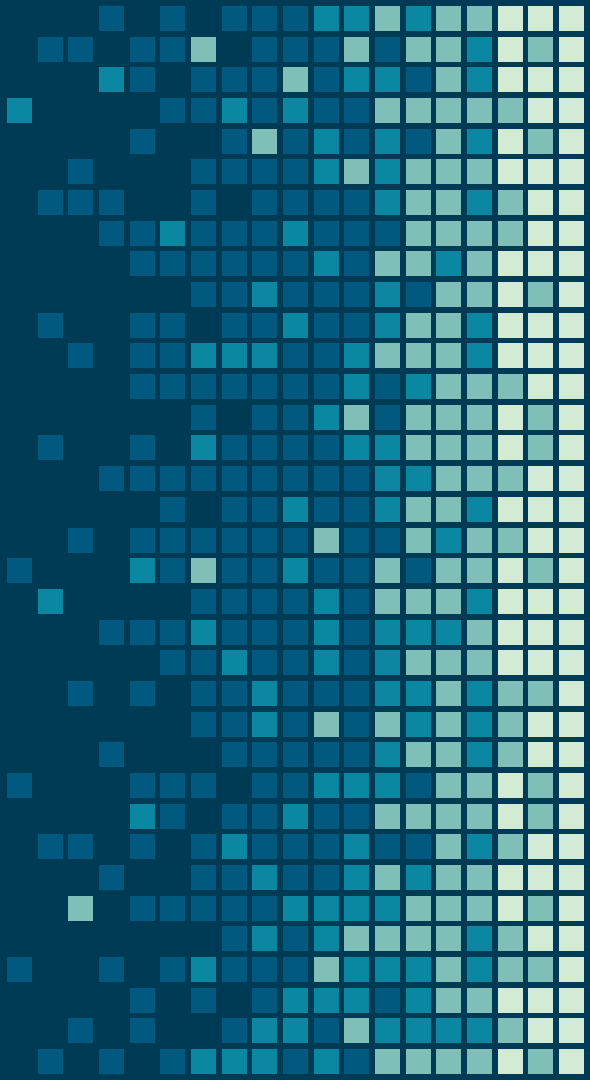
Professor Andrew Obatake

Mentor

TA Dylan Tokita

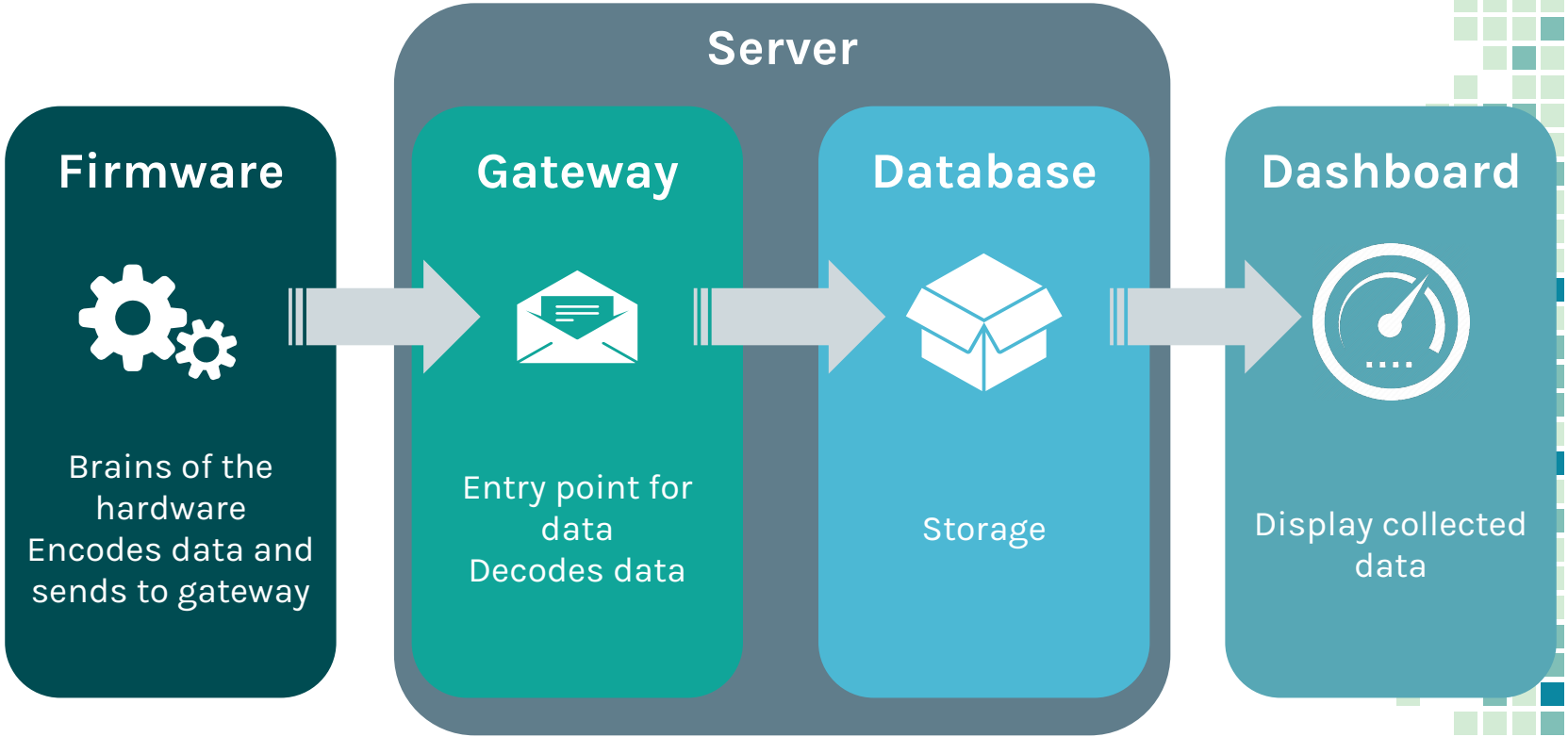
Mentor



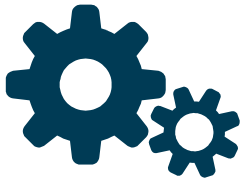
Overview

- High level Block Diagram
- Overview of Firmwater System
- Overall Goals
- Gantt Chart
- Challenges
- Learning Expectations

High-Level Block Diagram



Overview of System



Firmware

- Sample data through sensors in weatherbox
- Package and transmit data through Xbee to Gateway
- Report status of weatherbox

Overall Goals

- Implement Real-time Clock and GPS
- Implement Snapdragon
- Update Gateway

Gantt Chart

	Firmware Gantt Chart																
Week	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
Date	1/15/2018	1/22/2018	1/29/2018	2/5/2018	2/12/2018	2/19/2018	2/26/2018	3/5/2018	3/12/2018	3/19/2018	3/26/2018	4/2/2018	4/9/2018	4/16/2018	4/23/2018	4/30/2018	5/7/2018
Presentations / Final Report																	
Proposal			**2/3/2018**														
Preliminary Design Review						**2/24/2018**											
Critical Design Review										**3/24/2018**							
Demonstration/Final Presentation															**4/28/2018**		
Final Repot																	**5/11/2018**
Research																	
Overview of Firmware																	
C++																	
Firmware																	
Implement Snapdragon																	
Implement GPS																	
Implement Real-Time Clock																	
Gateway (Snapdragon)																	
Gateway (Guava)																	
Potential New Features																	

Challenges

- Learning Curve
  - C++
  - Understanding current firmware
- Implementation
  - GPS & Real-Time Clock
  - Snapdragon
- Update Gateway

Learning Expectations

- Learn C/C++
- Teamwork and Collaboration
- Understand the system at a low level
- Utilizing Github in a team setting

Questions?