Abstract
To accelerate smart city growth, Fujitsu Network Communications is working to install hardware sensors which monitor parking conditions, waste management, and more. This project features the development of mobile applications to help employees monitor and install these sensors and for users to make parking reservations.

The objective for Phase 2 is to create a backend and database and build an interface for the applications to communicate with the backend, as well as to fix any bugs from Phase 1.

Architecture
Android and iOS Applications
- Apache Cordova
- Ajax
- jQuery Mobile
- Moment.js

Backend and Database
- Node.js
- Sequelize
- MySQL
- Heroku

Impact
Smart City applications aim to futurize cities by using IoT technologies to monitor parking, waste, and more. Our work this semester was the next important step to completing this objective.

Before
- UI design supported by basic hardcoded values

After
- iOS support
- Full backend implementation and integration with both mobile apps
- Admin web app for direct data modification

Results
User App
Admin App

Performance Metric
- Weekly task completion rate: 92%
- Some features were not completely implemented
- Company mentor feedback: goals were met and pleased with work performed this semester
- Functional expectations were met (completed functions do not have bugs or interruptions)

Summary
- Replaced hardcoded values with calls to the backend database
- Improved usability and UI for installing devices and reserving parking spaces (e.g. navigation to parking spot, persistent login, user preferences, etc.)
- Admin website to create users, bulk import sites and devices, easily view sites and devices