

# KYLE LANE

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## DEVELOPMENT

Python ~ R ~ C++ ~ Javascript  
PHP ~ HTML ~ CSS ~ SQL  
React-Native ~ React ~ Redux  
AWS ~ Git ~ Luigi ~ Scikit-learn

## DESIGN

Photoshop ~ InDesign ~ Figma  
User-Centered Design

## INTERESTS

### Hockey

Competitive AAA ~ 2005-2015  
Captain ~ 2011-2015

### Sports Analytics

Researching statistics that organizations use to gain competitive advantages

### Mountain Biking

Organizing weekly rides and challenges

## EDUCATION

### Systems Design Engineering

BASc Candidate ~ University of Waterloo  
Pursuing Intelligent Systems Option and Economics minor

## ONLINE COURSES

### The Complete React Native and Redux Course

Udemy (S Grider)

### Machine Learning

Coursera (Stanford)

### Applied Machine Learning in Python

Coursera (U of Michigan)

### Intro to Data Science in Python

Coursera (U of Michigan)

## WORK EXPERIENCE

### Baseball Operation Data Developer ~ [Toronto Blue Jays](#)

Toronto, Ontario ~ 09/2018 - 12/2018

- Proposed and implemented over 30 new fielder metrics from raw player location data to enhance player valuation and improve defensive projections (**Python, Luigi, R**)
- Created a 3D library for plotting pitches, hits, and other visualizations while working with coaches to develop associated apps (**OpenGL, R, Shiny**)
- Developed supervised learning models to improve defensive projections, throw accuracy metrics, and investigate pitch level expected outcomes (**R**)
- Led integration with new Box API and designed pipeline for imports (**Python**)

### Full Stack Developer ~ [Sprout At Work](#)

Toronto, Ontario ~ 01/2018 - 04/2018

- Owned development of key features including activity tracking and Apple Health Kit integration for Sprout's new cross-platform mobile app being shipped to over 4 million users (**Full Stack**)
- Implemented RESTful APIs and utilized AWS to produce test driven back-end development (**PHP, CodeIgnitor, MySQL, AWS**)
- Architected core front-end features including a full base component library, on-boarding flow, and dashboard (**React-Native, Redux**)

### Engineering Assistant ~ [R.J. Burnside](#)

Orangeville, Ontario ~ 05/2017 - 09/2017

- Proposed and developed a web application to improve organization and productivity within the First Nation Communities
- Designed and implemented features including task tracking and a user management system (**HTML, CSS, PHP, JS, MySQL**)

## PROJECTS

### Puck Luck (NHL Probability Stats) ~ [thepuckluck.com](https://thepuckluck.com)

- Created new probability stats (eg. expected goals [xgoals], xshooting%, xsave%, shot quality) based off goal prediction model, creating unique metrics to evaluate shooters, goalies, and teams (**Python, Postgres, AWS**)
- Developed an open API for easy access to the data (**Flask, Elastic Beanstalk**)
- Visualizing/displaying data and posting research at [thepuckluck.com](https://thepuckluck.com) (**React**)

### Deep Stats

- Developing mobile app that combines data to present NBA statistics which cannot be found on leading sports apps (**React-Native**)
- Functionality includes live in-depth game scores with advanced statistics, comprehensive player stat pages, and standings

### Happy Hip

- Created an activity tracker that counts steps, movement type, and time sitting to promote active lifestyles in students (**Arduino C/C++**)