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# LELAND JANSEN

**BSc Software Engineering**  
University of Alberta  
Class of April 2019  
GPA 3.5/4.0

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## EMPLOYMENT

**Apple · iOS Keyboards Intern · Input and Intelligence** **May – December 2018**

- Developed a **customer-facing system-wide feature** that will ship in iOS to **>100M customers**. Responsible for both frontend and backend logic. Presented the feature to Apple's SVP Software.
- Conjured an algorithm to measure hand dimensions using iPad's capacitive touch sensor data. Calculates hand height, span, glove size, and handedness using a single "handprint".
- Researched machine learning techniques to improve keyboard typing accuracy. Developed an **end-to-end pipeline** including data visualization and labeling tools, implementation, and evaluation.  
[www.lelandjansen.com/apple](http://www.lelandjansen.com/apple) | Objective-C, C++, Cocoa, Cocoa Touch, Python, Scikit-learn

**Google · Software Engineering Intern · AdsCrawl** **May – August 2017**

- Developed Lightbulb RPC sharding service from **start-to-finish** in three months including design, implementation, testing, and deployment. Processes on the order of **100k requests/second**.
- Lightbulb reduced rejections between services by **6.1x** and compressed standard deviation by **5.0x**. Allows upstream service task count to scale without disproportionately increasing request rejections.  
[www.lelandjansen.com/google](http://www.lelandjansen.com/google) | C++, Google Test, Stubby (gRPC)

**Zaber · Software Developer Co-op · Firmware and Electronics** **January – April 2017**

- Developed **three customer-facing features** during four-month placement: custom autocomplete text field, new software installer, and crash-reporting system including client and backend logic.  
[www.lelandjansen.com/zaber](http://www.lelandjansen.com/zaber) | C#, .NET, WPF, Python

**Shopify · Developer Intern · Production Engineering** **May – August 2016**

- Pioneered tooling framework to automate server tasks and enabled operation through ChatOps bot. Tools used daily by Production Engineering teams.
- Authored load balancer configuration and moved services to new infrastructure with **no downtime**.  
[www.lelandjansen.com/shopify](http://www.lelandjansen.com/shopify) | Ruby, Chef, RSpec

## PROJECTS

**Fatigue · iOS app**

- Native iOS application for geophysical-survey pilots to self-assess their fatigue level.
- Developed UI **programmatically** with an intuitive data entry mechanism.
- Models questionnaire as a graph to enable a modular implementation and longest path computation.  
[www.lelandjansen.com/fatigue](http://www.lelandjansen.com/fatigue) | [itunes.apple.com/app/fatigue/id1211561428](https://itunes.apple.com/app/fatigue/id1211561428) | Swift, Cocoa Touch

**TickTickTick · Winning hackathon project**

- Team of five developed Slack feature in **ten hours** to remotely execute code snippets and return the result including text, generated images, graphs, and website renders.
- Responsible for project scoping and planning, containerization, and backend.
- Project won **first place (\$10,000)** against fifteen other teams.  
[www.lelandjansen.com/tickticktick](http://www.lelandjansen.com/tickticktick) | Docker, JavaScript

**ScaleBook · Musical scale website**

- Musical scale reference website for pianists studying towards technical examinations.
- Custom natural language processing algorithm interprets user queries with **99% accuracy**.
- Developed music algorithms to **compute scale information** in lieu of querying a backend database.  
[www.lelandjansen.com/scalebook](http://www.lelandjansen.com/scalebook) | [www.scalebook.org](http://www.scalebook.org) | JavaScript, CSS, Angular

## LANGUAGES AND TOOLS

- Advanced proficiency with modern C++ and Python.
- C, Objective-C, C#, Java, JavaScript, Mathematica, MATLAB, Ruby, Rust, SQL, Swift.
- Chef, CMake, Cocoa, Cocoa Touch, Docker, Git, Google Test, gRPC, networking, .NET, NUnit, RSpec, WPF.
- English (native), Spanish (advanced).

## COMPLEMENTARY SKILLS

- Dedicated CrossFit athlete (2013 – present) training **5 days/week**.
  - Level 8 piano with **first-class honors** (Royal Conservatory of Music, 2013).  
[www.lelandjansen.com/crossfit](http://www.lelandjansen.com/crossfit) | [www.lelandjansen.com/music](http://www.lelandjansen.com/music)
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