

# Alexander Whiteside

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## WORK EXPERIENCE

**Chief Technology Officer / Founder** 2016 to Present

Birch Finance, LLC - San Jose, CA

- Architected, designed, implemented and operated Birch Finance's API and UI platforms (J2EE, Swift, Flutter)
- Developed core data models to allow product agnostic computations (MySQL/Java)
- Created a deep integration into aggregators (Plaid/Finicity), as well as consuming affiliate APIs into the data model
- Architected an environment (EC2/Lambda/VPC) to allow Birch's services to scale to 30k+ users
- Managed and implemented platform changes to integrate Birch with Success.ly and Qantas Loyalty
- Developed analytics and marketing tools to allow deep linking, notifications and tracking across web and mobile
- Organized product management, technical documentation and various internal tools

**Software Engineer - Tactical Integration Strike Team** April 2015 to 2016

Ultimate Software - Weston, FL

- Expanded core APIs within Ultimate's primary product, Ulti-Pro (C#)
- Built microservices to allow Ulti-Pro events to be subscribed to by external parties (Node.js / Go)
- Implemented unit and integration test plans for API and UI components (Selenium/C#)
- Developed an Informatica connector for Ulti-Pro to integrate with Netsuite (Java)

**Chief Technology Officer / Founder** April 2012 to 2016

Robotic Interactive Learning Environment - Pensacola, FL

- Developed RILE, a robotics based teaching platform designed for middle/high school students
- Programmed autonomous robots (C/C++), motion-tracking systems (C), server based applications (Java) and graphical user interfaces (PHP/JavaScript/JavaFX)
- Designed custom control hardware based on ATMEL processors (Altium), developed a base chassis (AutoDesk Inventor) and worked with international injection molding plastics companies for production
- Created marketing, web and lecture resources for multi-national conferences, trade-shows, and business events
- Managed employees, including physics and technical teams, in India and the United States

**Researcher and Project Manager - Applied Science and Technologies** 2013 - 2016

University of West Florida - Pensacola, FL

- Worked as a consultant/developer for various projects (Robotic Arm Painter, Tour Robot)
- Built online laboratory experiments for IT classes (Sites Networking)

**Technical Analyst/Developer - Global Infrastructure** Summer 2013

American Express Technologies - Weston, FL

- Developed a web based portal and deployment system (J2EE / Spring) for PEGA users to test their applications in real environments, provide resource auditing and enforce security/software design life-cycle protocols
- Created documentation and followed AMEX software development lifecycles

**Developer - Computational Fluid Dynamics** Summer 2012

Air Force Research Lab - Eglin Air Force Base, FL

- Extended a Fluid/Structural Dynamics Vortex Solver (C++/Fortran) to allow physics based flexible wing simulations and 3-D simulation (Maya).
- Managed a military grade mid-sized network enclave
- Developed LaTeX templates/resources for engineering teams

**Photographer/Owner** January 2009 to March 2012

Whiteside Photography - Navarre, FL

## EDUCATION

**B.S. Software Engineering** - University of Florida, Gainesville, FL 2012 to 2016

**Non-Degree Seeking Student** - University of West Florida, Pensacola, FL 2010 to 2012

## PUBLISHED WORKS

<b>International Journal of Computer Science (New Delhi, IN)</b> A comparison of Computer Vision Techniques for Indoor Robot Localization	December 2016
<b>International Journal of Information Technology</b> An Exploration In The Use Of Minecraft To Teach Digital Logic To Secondary School Students	November 2016
<b>EdMedia World Conference On Media and Technology (Tampere, FI)</b> The Development of Online Laboratory Experiments for College Level IT Students	June 2014
<b>Consortium of Computer Sciences in Colleges (Greenville, SC)</b> The Design and Implementation of Tele-Robotics in Education	November 2013
<b>Cengage Learning (New York, NY)</b> Android App Inventor for the Absolute Beginner	June 2013
Robotics: A Project Based Approach	October 2014
<b>IEEE Robotics in Education Conference (Prague, CZ)</b> RILE - A Remote Robotic Interactive Learning Environment	September 2012

## COMPETENCIES

### **Programming Languages (and Common Libraries/Frameworks):**

Java (J2EE, Spring), C/C++ (OpenCV, ROS), C# (.NET), Python (Django), Swift, Dart (Flutter), Go, PHP, JavaScript (Node.js, Express, JQuery, Redux), MySQL, HTML/CSS

### **Platforms and Professional Applications:**

UNIX/Linux, Most AWS Offerings (Networking, DB/Cache, SQS, Routing, Orchestration), Docker, Apache/Tomcat, REDIS, Kafka, LaTeX, Altium, AutoDesk Inventor, IntelliJ, JIRA, Jenkins, TeamCity, YouTrack