

Rajat Dixit
Electrical and Computer Engineering

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About Me

I describe myself as an active learner and listener. I believe that learning doesn't stop after high school, university or even when you land your dream job. Learning is life long and I think as an engineer, a developer and an educator you have to be dynamic enough to pick up new stuff along the way. One shouldn't be afraid of venturing out and trying something different everyday.

The opportunity to learn something new drives me out of bed every morning. It could be the next best Groupon deal or reading a new piece of tech news. The ability to deliver knowledge in the form of a product or service to others makes me proud and satisfied everyday. Part of learning is having fun with whatever project you take. Since there is no end to fun, you can keep learning for as long as you like.

My passion lies in embedded systems, digital system/processor design, PCB designing, firmware development and application programming.

I also have a keen interest in product/project management in the field of engineering.

Education

University of British Columbia, Vancouver, Canada
Major : Electrical and Computer Engineering

Work Experience

ACR Systems

Sept, 2017 – Present

Electronics Hardware Engineer

- Hardware engineer responsible for prototyping, designing, building and programming (firmware) consumer products. Building a good skillset in interfaces like USB, I2C, SPI, UART and more.
- Performing competitive market analysis on a regular basis and feeding this data to sales and marketing to ensure good technological assessments for future product revisions.

Ixonos

April, 2017 – Sept, 2017

Engineering Assistant

- Software test engineer working towards building a good knowledge of Android App development. Using a Linux based system to run Android CTS (Compatibility Testing Suite) to test and report issues in software builds to core developers thereby helping them find bugs in early development stages.

Savox Communications

Jan, 2015 - April, 2017

Product Support Engineer

- Testing Engineer responsible for troubleshooting products at hardware and software level.
- Performing competitive landscape analysis for products that have direct competition.
- Performing product technology assessments to understand technological trends and how they drive innovation. Setting requirements, constraints and goals for projects within the company.
- Continuously improving communication with current and prospective customers and partners by following clients' business and technical needs. Getting feedback from partners and using that to steer future product revisions.
- Focusing on customized product development for businesses and understanding technical challenges. Make educated decisions based on different company situations.

- Defining market requirements to company's software and hardware developers and ensuring developed products meet market and customer needs.
- Bridging gap between the market, the customer and the developers in the company.
- Knowledge and practical experience of Pragmatic Marketing and CIRCLES framework techniques.

Sager Education Inc

May, 2014 - Present

Computer Science and Robotics Instructor

- Teaching 'LEGO Mindstorms' / Robotics to high school students.
- Responsibilities include classroom management, lesson planning, hands on training on assembling hardware (motors/sensors) and software (programming the robot to follow a given set of instructions).
- Programming and testing xPartner robotic components. Teaching students between grades 6-9 basic LEGO flow programming. Helping students from grades 10 onwards working on competition tasks using C code.
- Team Canada captain and referee for WER 2014/2015/2016 and 2017. My team of 3 instructors and I were responsible for the training of all students of all grades participating from Canada. The teams competed with students around the world and won prizes in different age groups.
- Team Canada captain for world renowned KIPR and RoboRAVE competitions.

Skills

- *Design Software*: Solidworks 15-16, Altium Designer, MatLab, Quartus II, Cadence Virtuoso, SPICE, Multisim and CircuitMaker
- *Prototyping*: 3D printing, Arduino and PIC based controls, Multimeter, Function generator, Oscilloscopes, Soldering, Power supplies, Breadboarding
- *Programming*: C/C++, Arduino IDE, MPLAB, Visual Studio, Coursework in embedded C, Good basics in Java, HTML5 and CSS.

Projects

- *UBC Sailbot*: Worked on building an autonomous boat with a student-run team. The boat sailed the Atlantic Ocean using wind and solar power.
- *Bluetooth IOT Smart Switch*: Lead electrical and PCB designer. Also worked on iOS app development. Smart switch currently in market production.
- *MATLAB Research Paper*: Analyzed ICE patterns in Antarctica using image processing tools from MATLAB. Created design models and cross-referenced them in MS-Excel for accuracy.
- Detailed outline of past projects in portfolio at <http://rajatdixit.ca/projects.html>

Interests

Arduino based home projects, Photography, Biking and hiking, Meet.com hardware/software events, Networking, Robotics, Product management, Product design/engineering