Kevin Lutzer

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Education

University of Saskatchewan, Saskatoon, SK. Canada   Sept 2012 – Dec 2016
B Sc. Computer Science

University of Saskatchewan, Saskatoon, SK. Canada   Sept 2012 – Oct 2016
B.E. Electrical Engineering

Professional Experience

Vendasta, Saskatoon, SK. Canada   September 2017 – Present
Intermediate Software Developer

- Develop progressive web apps.
- Build application programming interfaces (API) using both remote procedure call (RPC) and hyper text transfer protocal (HTTP) with create, read, update and delete (CRUD), as well as representational state transfer (REST) operations.
- Mentor new developers.
- Develop frontend architecture and design patterns.
- Provide technical information and problem resolution for inquiries through internal QA software and blogs.
- Interview potential software developers.
- Conduct performance reviews.

Vendasta, Saskatoon, SK. Canada   March 2017 – August 2017
Junior Software Developer

- Built asynchronous JavaScript and XML (AJAX) endpoints with (REST).
- Developed knowledge base of industry common programming practices and processes.
- Participated as an effective member of a developer team.
- Took on a leadership role for executing various projects to inhance software performance.

University of Saskatchewan, Saskatoon, SK. Canada   January 2015 – August 2015
Research Assistant

- Conducted research on infrared sensors for gastrointestinal cancer detection using photonic and optical principles
- Performed experiments using an application specific fluorospectrometer

Technical Skills

- **Programming and Scripting Languages**: python, html5, js, css, scss, matlab, bash, java, assembly, C, C++, typescript, go, and LaTeX
- **Software Tools and Applications**: GDB, Subversion, git, GitHub, Netbeans, Eclipse, Atmel Studio, Brackets, Texmaker, Visual Studio Code, OpenSCAD, Keil, FileZila, Virtual Box, RealVnc, make, Arduino IDE, and Docker.
- **Development Ecosystems**: Raspberry Pi, Arduino.
- Progressive web app development.

Technical Skills Con't

- Backend web development.
- Utilizing 3D printers, laser cutters, and CNC mills.
- Theory and application of analog and digital electronics.
- PCB development using Cadsoft EAGLE.
- Circuit design.

Notable Coursework

CMPT 332(Operating Systems)
- **Theory**: Low level programming, OS processes, threads, inter-process communication, kernel theory, system calls, memory management, process scheduling, file-systems, and disk I/O. Assignments were done by adding features to xV6 operating system by MIT.

EE 495(Engineering Final Design)
- **Theory**: Engineering design method. Project development into a proof of concept from a list of specifications and requirements. Time and money were budgeted by students in approval with supervisors. Supervisors enforced deadlines of the project.
- **Built**: A computer visioning system that can measure the velocity of a drone reference to the ground using a raspberry pi, web-cam, sensors, and openCV2.

EE 465(Digital Electronics Design)
- **Theory**: 16-QAM modulator design and implementation.
- **Built**: A system that could transmit and receive data using 16-QAM modulating on a field programmable gate array development board.

EE 280(Abstract Data Types and Algorithms)
- **Theory**: Time and space complexity, algorithm development for operations to manipulate data in common abstract data type structures. The abstract data type structures studied include a multitude of different trees, hash tables, single/double linked lists, stacks and queues.

Recent Projects

Sumobot V3(Competition Sumo Robot)   August 2016 – Present
A regulation 500g 10x10cm sumo robot that is meant for the 2017 RoboGames in California.
- **Languages Used**: Embedded-C, Assembly
- **Technologies Used**: custom printed circuit board, electronics, Atmel Studio 6, 3D printer, and a Atmel AVR MCU

Electronic Business Card(Portfolio Project)   July 2017 – September 2017
A small hardware efficient USB device that multiplexes messages across a custom 4x5 led matrix.
- **Languages Used**: Embedded-C, Assembly
- **Technologies Used**: custom printed circuit board, electronics, Atmel AVR MCU, and Atmel Studio 6

Personal Website(Portfolio Project)   October 2016 – Present
A reactive web app to highlight my projects and current experience.
- **Languages Used**: Javascript, Typescript, SCSS, CSS
- **Technologies Used**: google appengine, google cloud storage, google cloud functions, google datastore, angular2, material design

References   Available upon request