KEVIN LIU
IB MECHATRONICS

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SKILLS SUMMARY

Programming

- Java/Groovy, C++, Python, HTML/CSS, Bash, JSON, XML, Powershell, Arduino, Javascript (React)
- IDEs: Eclipse, Netbeans, DevC++, PyCharm
- Operating systems: Windows, Linux/UNIX, Android
- Technologies: Git, TortoiseHg, VMWare, Virtualbox

Manufacture and Design Technologies

- Blender, Cinema4D, AutoCAD, and SolidWorks
- Experienced with Adobe Photoshop and PaintTool Sai
- Experienced with soldering and 3D Print Prototyping

Personal

- Strong problem solving and communication skills
- Trilingual English, French (DELF B2), and Mandarin

RELEVANT EXPERIENCES

Imagine Communications Corp. – QA Analyst   January 2017 – April 2017 | Toronto, Ontario
- Created custom **Python** tools with **Google Sheet API** to streamline QA reporting and asset tracking for Epic-Mv PIP sharing and multicasting team, greatly improving efficiency in the QA Team
- Created 70 media encode, transcode, and multiplex test suites in **Groovy** for continuous regression testing
- Created **bash scripts** to modify over 900 **XML** automation test suites for migration and compatibility with Linux
- Performed **database migration** smoke tests, application level **functionality test**, and backend **stress/performance tests**

Ciena Inc. – IT Council Technician   August 2015 – September 2015 | Ottawa, Ontario
- Managed appointments using Outlook with over 120 Ciena employees to improve laptop performance through software diagnostic, updates, and hardware cleanups
- Built and imaged 66 new Linux workstations with RedHat to be distributed to Ciena employees
- Provided RAM, HDD, and cooling hardware upgrades as well as desktop maintenance tutorials to employees

PROJECTS

Receipt Relief – Android Budgeting Application   May 2017 – May 2017 | Waterloo, Ontario
- Used **Google Vision API** to parse camera data in real time and scan paper receipts into storage
- Created the bounding box parsing heuristics to detect important receipt features with multiple revision for accuracy

Knock Password Door Lock – Arduino Project   January 2017 – May 2017 | Waterloo, Ontario
- Sound activated password storage and verification based on Arduino to unlock dorm room; programmable in real time
- Double volume sensor for sound source locating; single servo deadbolt actuation

Robot Plotter with Tic Tac Toe AI – MTE100 Final Project   October 2016 – December 2016 | Waterloo, Ontario
- Designed, machined, and constructed a 2 axis CNC robot capable of writing on and reading from a whiteboard
- Created an AI in C++ capable of reading player moves, computing optimal moves, and executing a counter move
- Built the CNC platform around modular abstraction, allowing for easy implementation of other features

BlackMagicks – JAVA top-down Arena Game   February 2015 – June 2015 | Ottawa, Ontario
- Built an object oriented third person arena game in Java with combination mechanics for attacks and moves
- Developed a hitbox sensing algorithm, basic enemy AI and pathfinding, and integrated handmade sprites

EDUCATION

University of Waterloo – Candidate for Bachelor of Engineering   September 2016 – Present | Waterloo, Ontario
- Teams: WATonomous autonomous car, Waterloo MarsRover
- Relevant Courses: Algorithms and Data Structures, Digital Computation (C++/RobotC), Engineering Graphical Design
- Extra Courses: Stanford Machine Learning Online