Adrian H. Padin

326 E. Madison St, Ann Arbor, MI 48104
apadin@umich.edu · (440) 724-9273

SUMMARY

Seeking a full-time software engineering position. I have 2+ years experience in embedded Linux software development in C++, and a year of experience in data processing and machine learning in Python. I am a motivated and hard-working individual with a desire to make a difference and collaborate with like-minded people.

EDUCATION

University of Michigan — Ann Arbor, MI
B.S.E. in Computer Engineering — May 2017
Minor in Music
GPA: 3.94/4.0

Relevant Coursework

EECS 473: Advanced Embedded Systems	EECS 482: Operating Systems
EECS 461: Embedded Control Systems	EECS 445: Machine Learning
EECS 373: Microprocessor Programming	EECS 388: Computer Security

WORK EXPERIENCE

Control-Tec, LLC. — Allen Park, MI
C++ Software Developer, Embedded Linux — May 2017 - Present

- Developed next-generation automotive data collection software for a live data-processing application called CT-EDGE. This software collects data from the vehicle using broadcast CAN and standardized request formats including J1979 and UDS, and can analyze the data based on configurable triggers to send notifications and telemetry to a cloud server over a cellular connection.
- Gained extensive experience with the Legato embedded Linux IoT platform. The platform is similar to Android, where developers can create sandboxed "apps" that communicate through secure IPC. This allowed our team to improve security by separating functionalities such as vehicle data collection, cloud communication, and over-the-air firmware updates.
- Managed a small team of engineers to assist in software development and white-box testing.

Merit Network, Inc. — Ann Arbor, MI
Research Assistant, Data Analyst — May 2016 - May 2017

- Research assistant in Security Research division under Dr. Michalis Kallitsis, whose primary research focused on anomaly detection for early warnings of Distributed Denial of Service attacks and other malicious data-injection attacks.
- Assisted with a project to develop Machine Learning algorithms and tools to detect false data injection attacks on a smart electrical grid. The goal was to prevent an attacker from manipulating a homeowner's electricity usage. This was done by monitoring sensors in the home (such as temperature, humidity, and noise volume) and using a prediction model to estimate what the eletrical usage should be. I wrote scripts to aggregate the data, store it in a database, feed the data to the algorithm (designed by Dr. Kallitsis) and interpret the results.
- Primary author on a research paper detailing an experiment conducted at a facility in Detroit, MI, to test the custom analysis software we had designed in a real-world environment. The paper was presented by Dr. Kallitsis at a conference for IoT Smart Grid applications.

Innovative Devices, Inc. Bedford Hts., OH
Software Engineering Intern May 2015 - Sept 2015

- Assisted in research and development of the Mycestro wearable computer mouse and worked with a team of engineers to develop integration software in Python and Ruby for using the Mycestro as a 3D mouse.
- Wrote Python plugins to model rotations of simulated objects using matrix rotations and vector mathematics. Motion data from the Mycestro was then used to control these rotations.
- Attended patent strategy and business development meetings, and gave sales presentations to potential investors.

TECHNICAL SKILLS

Programming Languages:

- Proficient in C, C++, and Python.
- Comfortable with Matlab and Bash.
- Also worked with Ruby, HTML, PHP, C#, Java, and Mathematica.
- Familiar with Object-Oriented and Functional design strategies.
- This resume was created with LaTeX. You can view the source files on my GitHub page (see bottom).

Software:

- Linux and Windows user, especially Linux command line tools.
- Git version control.
- Google Test (gtest) unit test framework
- Many years of experience with Microsoft Word, Excel, and PowerPoint

Hardware:

- Designed custom PCBs using Eagle design software.
- Experienced with hand soldering PCBs and components.

PERSONAL

University of Michigan Marching Band Aug 2013 - May 2017
Trumpet Player
Manager, MMB Merchandise Staff from 2014-2015
Treasurer, Tau Beta Sigma Honorary Band Society from 2015-2017

Favorite Text Editor: Visual Studio Code (GUI), Vim (terminal)
Favorite Browser: Firefox
Hobbies: Playing trumpet, building gadgets, video games

WEBSITES

LinkedIn: https://www.linkedin.com/in/adrian-padin-320a34a4
GitHub: https://github.com/padinadrian
Stack Overflow: https://stackoverflow.com/users/story/5179394

References available upon request