Jennings Leavitt

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RELEVANT SKILLS

- **Languages: Go**, C++, C, Python, Java
- **Tools/Frameworks: gRPC/Protocol Buffers, Docker**, Kubernetes, GCP, **Github, GitLab, above average experience with PostgreSQL**, SQLite, CI/CD, CI pipelines, **Linux/Unix OS, terminal/shell (bash & zsh)**
- **Coding Standards: REST api's, Unit & Integration Testing, Code Reviews**, **Design Patterns, microservices**

CAREER

TCN, Inc., St. George, UT - *Software Engineer II - Backend*

MAY 2021 - AUGUST 2022

Company focus: Cloud-based services for call centers.

- Worked actively with an **agile-style** front and back end team.
- Contributed to a new web-based product for workforce management using several algorithms and machine learning to predict future call loads and then create schedules to handle those call loads including scheduling agents with corresponding skill sets to the predicted call load.
- Skills and Procedures used:
  - **Go, Python, gRPC, PostgreSQL, Docker, Kubernetes, GCP, REST api's, Unit & Integration testing, GitLab** - VCS, **CI/CD** - bi-monthly releases, CI - pipelines, Hexagonal Architecture, **Code Reviews** - Peers and Code Owners, **microservices**

BYU – Configurable Computing Lab (*Graduate Research*), Provo, UT

Back End Software Engineer *(Embedded Systems)*

MAY 2017 - APRIL 2021

- Refactored a "Macgyvered" repository for one of the main tools used in radiation testing by our lab and sponsors.
  - This was a **solo project** assigned to me by the professor in charge of the project and **I saw it through until the successful completion of the refactor,** including regression testing.
  - **Extensive use of design patterns**
  - OOP
  - Interfacing with linux kernel drivers
  - **Overall linux knowledge**
  - **Regression testing**
  - **Strong refactoring experience**
  - C++
- Developed tools used onboard during radiation testing to validate memory state and correct it if necessary
  - Resulting Tools:

        - Custom firmware, Linux kernel driver, Linux application
            - Included automated initialization, logging, and system reset if necessary.
    - Skills:
        - **Extensive experience with linux**
        - Expertise in learning from complex technical documentation
        - Used to running into roadblocks, and keep pushing to find a solution

Jiffy Lube, Orem, UT- *Assistant Manager*

JANUARY 2014 - MAY 2017

➔ I helped lead our store's team to its goal of hitting $1M in net sales in a single year!

EDUCATION

Brigham Young University, Provo, UT

B.S. in Computer Engineering, Computer Science & Mathematics Minors

JANUARY 2014 - DECEMBER 2018

RELEVANT CLASSES:

- **Intro to Machine Learning:** I learned about and coded by hand algorithms like K-Nearest-Neighbor, Backpropagation, and Decision Tree Learning, and grew familiar with several others.
    - Machine Learning, **Algorithms**, Python
- **Software Design and Testing:** Collaborated in a team project where we designed an android app based on the board game "Ticket to ride."
    - **Software Design**, UML, XML, **Design Patterns**, UI, FE/Client(s), BE/Server, J Unit Testing, MongoDB, SQLite, Java
    - Proof of skills can be found in the team repository:

https://github.com/gaskint/CS_340/

Brigham Young University, Provo, UT- *Graduate studies in Electrical and Computer Engineering*

JANUARY 2018 - APRIL 2021

RELEVANT CLASSES:

- **Self-Driving Cars:** My team and I implemented lane-following, object avoidance, Indoor positioning system (IPS) path-following, and basic traffic rules like stop signs and traffic lights.
    - **System level programming, Multithreading, Task Scheduling, Multithreaded Communication** (Queues in this case), Image processing, **State Machines** — all in Python
    - Repository link below:

https://github.com/hgsphere/selfdrive

- **Hardware/FPGA Verification:** I ran exhaustive automated testing on the L3 16-bit processor with a simple one-line command to verify that all the processor's design was correct!
    - **Testing frameworks, Assertions, and Test Automation**

- **High-Level-Synthesis:** I competed with classmates to get the most efficient and/or fastest designs of common computations like matrix multiply or sorting functions to convert from software to hardware.
  - **Algorithms, Optimization**, Virtual and Physical memory models
- **Advanced Computer Networking:** During this class I worked on two team projects to analyze data retrieved from BYU's DNS servers. Ultimately we discovered, and proved, that we could prevent a device from receiving a DHCP lease by assigning multiple identical hostnames.
  - Network protocols, Network security, Collaboration
- **Advanced Wireless Networking:** For a project, my partner and I hacked several different personal android devices via bluetooth.
  - IEEE Protocols and Security for WiFi, IoT, BL, ZigBee, etc.

PUBLICATIONS

Anderson, Jordan & Leavitt, Jennings & Wirthlin, Michael. (2018). Neutron Radiation Beam Results for the Xilinx UltraScale+ MPSoC. 1-7. 10.1109/NSREC.2018.8584297.