Kurt Grossnickle

Software engineer | Data scientist

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Education

Georgia Institute of Technology MS in Computer Science - Machine Learning Specialization **- 3.5 GPA** *December 2020*

Notable Courses: Computer Vision - Machine Learning - Artificial Intelligence - Robotics - Reinforcement Learning

University of Florida – Bachelor of Science in Computer Science *August 2013-May 2018*

Work Experience

Magic Leap *Fort Lauderdale, FL*

Software engineer in AR cloud *March 2020 – Present*

- Wrote highly concurrent, high throughput cloud AR systems in Elixir, Erlang, Python and C++
- Created cloud object recognition pipeline with fault-tolerant worker architecture, reducing crashes and cloud costs from original pipeline
- Reduced time to merge 3D objects from multiple inputs into one map by 80% with efficient caching and predictive algorithms
- Created cloud pipeline APIs to enable third party machine learning models to run on the Magic Leap device

Motorola Solutions *Fort Lauderdale, FL*

Software engineer II in advanced technology research *May 2019 – March 2020*

- Authored 3 US Patents in the fields of Computer Vision, Natural Language Processing, & Machine Learning & implemented each to product
- Created novel human ”intent” tracking algorithm with 2d and 3d computer vision mapping for security and access control
- Designed distributed python & C++ computer vision pipeline for high-throughput, real-time machine learning models of 4k video using FFMPEG, OpenCV & GPU/CUDA enabled Nvidia docker
- Communicated business value with Data Analytics & Visualization of ML model performances using Python, SQL, Pandas, Excel & Matplotlib
- Utilized Natural Language Processing to parse radio audio input and search video feeds for police/security suspects
- Leveraged Knowledge in Git, Docker, Python, Tensorflow/TensorRT to implement, test and visualize machine learning models in the Cloud & AWS and wrote C/C++ to port these model pipelines onto Jetson Nano and other small ARM architecture devices

Software engineer in cloud performance & devops *June 2018 – May 2019*

- Collaborated with UX team to implement custom Android keyboard which led to 50% faster typing of Police code words
- Implemented AI code reviewer with Live Data Analytics & Visualizations for the C++ & Java code base which decreased new code complexity by 30% and PR errors by 50% using SonarCube Code analysis with Jenkins and a Python Pipeline and Node.js graph visualizations
- Built an automated testing framework using Java & C++ for DSP code using Jenkins for nightly runs which reduced the time to find a DSP integration error by 2 weeks

Android and embedded software intern (2 summers) *May-Sep 2016, May-Sep 2017*

Orgs, Research & Select Projects

Dance Marathon (Local Charity Raising > 2M Annually) *Gainesville, Florida*

Director of Android and iOS development *August 2015 – June 2018*

- Android and iOS app team leader for a QR code check-in system with a Firebase backend which saved 10 hours of work a week and increased App usage 300%
- Redesigned the floridadm.org website to win Best Dance Marathon Website Award in 2016 out of over 300 universities

Side Project: TridentOutreach.com (Sole Developer) *August 2019*

- Built a Node JS webapp & Electron desktop app that automates actions for Linkedin, email & other online platforms
- Improves Linkedin’s search feature with simple NLP and helps > 100 paying users find ideal prospects on Linkedin
- Generates $40,000 annual revenue through over a 100 paying users

University of Florida Research *Gainesville, Florida*

Member of smart home simulation team *December 2015 – May 2016*

- Wrote the GUI, UI and time system in C# in the Unity 3D engine to simulate the smart home owned by UF
- Our 4 person team’s simulation platform decreased engineering testing time for physical devices by 40%

About Me / Skills

Languages & Web	Python, C++, Elixir, Node.js / Javascript, Java, C, C#, HTML/CSS
Cloud & DevOps	AWS, Docker, Unix, Linux, Kubernetes, CI/CD, Vagrant, Azure, Jenkins, HTML/CSS
Frameworks	Tensorflow, PyTorch, Numpy, SciPy, Pandas, OpenCV, Android Studio, TensorRT, Angular
Profession Skills	Git, Jira, Gerrit, Agile