

JACOB MINK

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OBJECTIVE

Computer science and applied mathematics student seeking a position in software development leveraging my two years of research experience in machine learning and three summers of experience in a firmware development environment.

EDUCATION

Fall 2015 - Present **B.S. Computer Science & Applied Mathematics**, Double Major – *Texas A&M University*, 4.0 GPA
Expected Graduation: December 2019
Honors: Engineering Honors, Math Honors, President's Endowed Scholar, National Hispanic Scholar
Courses: Deep Learning Theory and Applications, Machine Learning, Artificial Intelligence, Software Engineering, Computer and Network Security, Numerical Methods, Complex Analysis

SKILLS & ABILITIES

- C, C++, C#, Python
- Ruby, Java, Assembly, MATLAB, Haskell
- Abstract algebra, Complex analysis, Numerical methods, Differential equations
- Effective communication, Group leader

TECHNOLOGIES

- Machine Learning, Deep Learning, Artificial Intelligence
- PyTorch, ONNX, Keras, Tensorflow
- BIOS/UEFI driver development
- Arduino/Raspberry Pi
- LaTeX, Jira, Confluence, Bitbucket, Git, Agile

EXPERIENCE

Fall 2017 - Present Undergraduate Researcher, *Information Innovation Lab*

- Developing optimized error-correcting codes for binarized neural networks in Python and PyTorch
- Published thesis on error-correcting codes for memristor-based memory architectures ([link below](#))

Summer 2016, 2017, 2018, 2019 Intern, *Dell Technologies*

- **CTO Software (2019)** – Prototyped user-experience enhancements for Alienware gaming laptops using C#, ONNX, PyTorch, and Arduino
- **BIOS Security Team (2018)** – Modified firmware to implement industry standard security patches (VT-d) to mitigate hardware-based attack vectors, scheduled for release to customers
- **BIOS Tools Team (2017)** – Built BIOS-level battery telemetry & management driver (patent pending)
- **BIOS Tools Team (2016)** – Developed C#/.NET GUI for Dell Firmware Update, released to customers

PATENTS AND PUBLICATIONS

- Systems and Methods for Remotely Applying Battery Management Policies Based on Local User Behavior – Patent Application Number 15/852661
- J. Mink, Reliable Memory Storage by Natural Redundancy, Undergraduate Thesis, <http://oaktrust.library.tamu.edu/handle/1969.1/166476>
- P. Upadhyaya, X. Yu, J. Mink, J. Cordero, P. Parmar and A. Jiang, Error Correction for Hardware-Implemented Deep Neural Networks, to appear in *Proc. Non-Volatile Memories Workshop (NVMW)*, San Diego, CA, March 2019, <http://nvmw.ucsd.edu/nvmw2019-program/unzip/current/nvmw2019-final87.pdf>
- P. Upadhyaya, X. Yu, J. Mink, J. Cordero, P. Parmar and A. Jiang, Error Correction for Noisy Neural Networks, to appear in *Proc. Information Theory and Applications (ITA) Workshop*, San Diego, CA, February 2019.

HOBBIES

- Music - Texas A&M Jazz Band, tenor/alto saxophone, jazz & classical piano, guitar, mandolin, unique musical instruments
- Texas A&M Racquetball Team
- Church choir leader