

# Nathan Epstein

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Website: <https://aeium.github.io/blog>

## Technical Skills

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**Languages:** C, C++, OpenCL, Cuda, Python, Matlab, Javascript, Java, LaTeX

**Databases:** LMDB, MongoDB

**Other Skills:** Linux (use, remote use, admin), Deep Learning (Caffe, Tensorflow, Theano, Keras), Parallel Processing (OpenCL on multi-GPU, Cuda, SLURM), Data Wrangling, Web Development (JavaScript front-end, Javascript or Python back-end)

## Education

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**University of Maryland Baltimore County**

B.S. In Computer Science

Cumulative GPA: 3.36 / 4.00

*Baltimore, MD*

*Class of 2016*

## Projects

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### Ready, Set, Go!

- Predicting Go Moves using Convolution Neural Networks and the Caffe framework
- Directed group project, designed experiment and network, wrangled and procedurally expanded dataset

### RSA Public Key Factoring

- Large Integer Factoring for RSA Encryption on High Performance Cluster
- Gained experience with high per cluster and SLURM, learned RSA encryption and associated number theory

### Ready Set Go (Part 2)

- Learning and Visualizing Go using Structure vs Noise Classification
- Assembled and maintained deep learning system, developed methods to visualize network state and learning.
- Video presentation link (5 min version): <https://www.youtube.com/watch?v=-Yrwyu6z3V8>

### Complete Five-Neighbor Automata Survey

- Survey of 4.3 Billion Cellular Automata for edge of chaos complexity multi-gpus via OpenCL
- Learned to use OpenCL and AMDAPP SDK for large computational tasks. Found edge of chaos automata

## Experience

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**Zenimax Media Company, Bethesda Softworks**

Quality Assurance Intern

- Developed methods to find and reproduce bugs in game systems for Elder Scrolls V: Skyrim, which won several Game of the Year awards

*Rockville, MD*

*July 2011-12*

### Kaji.tech

Chief Technology Officer

- Designed and developed cloud based computer vision documenting processing system

*Baltimore, MD*

*Feb2016-Present*

## Other Experience

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**UMBC Go Club**

Core Member and President

- Achieved Shodan (1-dan) American Go Association (AGA) Rating in tournament play
- Organized Go Club meetings, Go related events with other student clubs
- Organized a regional AGA Tournament in 2014

*UMBC*

*Dec 2013-2016*

Link <https://www.usgo.org/news/2014/11/daniel-chou-tops-umbc-tourney/>