Matthew Murphy

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Education

- **Grinnell College** — Grinnell, Iowa
  B.A. Computer Science, with Honors; Major GPA: 3.97, Cumulative GPA: 3.71 — *Aug. 2014 – May 2018*
- **Academic Honors and Awards**
  - Grinnell College Trustee Honors Scholar Merit Scholarship
  - HackMIT 2017 Machine Learning Community Prize – Sponsored by Baidu
  - HackMIT 2016 Best project under 4Kb – Sponsored by Datto
- **Relevant Coursework**
  - Operating Systems, Bayesian Statistical Analysis, Computer Vision, Analysis of Algorithms, Networks

Experience

- **Facebook** — Menlo Park, CA
  Software Engineer Intern — *Summer 2017*
  - Engineer on Feed Machine Learning working on video chaining
  - Build a database of new user-behavior features extracted from web front end (PHP and Python)
  - Refresh and retrained ranking model with newly extracted features (C++ and Python)
  - Online experiments yield 6% increase in video watch, 10+% increase in share
- **MIT Lincoln Laboratory** — Lexington, MA
  Research Intern — *Summers 2015, 2016*
  - Trained SVM and Random Forest-based models to predict lethality of E. Coli strains based on degrees of genetic recoding, currently finalizing research paper with Dr. Peter Carr and Bea Yu
  - Parallelized computationally expensive 3D biological modeling software on LLGRID large compute cluster
  - Organized and lead team of other intern engineers to begin development on wearable technology for short range encrypted data transfer
  - Computationally modeled pairwise biological relations using transcription/translation models
- **Grinnell College AppDev** — Grinnell, IA
  Android Developer — *Oct. 2015 - Dec 2016*
  - GrinnellDB - an android application serving as a student database
  - Events - an android application for on campus events

Projects

- **RNN-LSTM-CTC for Robust Reading**: Implement a lexicon-restricted CTC decoder within TensorFlow backend to optimize predictions for ocular text recognition tasks in which a predefined dictionary is known. (C++, Python)
- **Graph Database**: Implemented graph-based database to store information with embedded relationships, with performant querying, appending and subsetting (C).

Technical Skills

- **Languages**: C++, Python, Haskell, Java, PHP, R, SQL **Technologies**: TensorFlow, OpenCV, Linux

Personal Interests

- **Grinnell College Varsity Cross Country, Track & Field**: Placed multiple times in conference meets
- **Pan Massachusetts Challenge**: 6 year rider, and raised over $6,000 for Dana Farber Cancer Research Int.