Maxwell Wong

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EDUCATION

- **UCI** Irvine, CA
  Bachelor of Science in Data Science *August 2015 – Present*
    - **Data Structure Implementation and Analysis [A-]**: Design and implementation of data structures in C++.
    - **Computer Simulation [A]**: Time and event based simulations.
    - **Machine Learning and Data Mining [A]**: Broad coverage of different regression and classification algorithms.
    - **Data Management and Project in Web Apps [A/A-]**: MySQL database management and full stack development of a Tomcat web app.
    - **Project in Data Science [A/IP]**: Senior capstone project.

EXPERIENCE

- **UCSD Keck Center for fMRI** San Diego, CA
  Independent Research Intern *January 2013 – June 2015*
    - **Magnetic Resonance Fingerprinting**: MR Fingerprinting was a new MR image reconstruction method at the time. Independently validated the method, as well as explored its boundaries and properties. Presented my findings and an abstract at ISMRM 2014.
    - **Kernel based image reconstruction**: Implemented a kernel based MR image reconstruction algorithm using OpenCL for parallization.

- **NIH/NIMH** Bethesda, MD
  Summer Internship Program *June 2017 – September 2017*
    - **Semantic vector extraction**: Carried out research within a group to develop and optimize machine learning algorithms to extract semantic vector information from MR brain data. Participated in weekly lab meetings, and presented my findings at a NIH-wide poster day.

- **Additive Manufacturing**
  FDM/DLP 3D printing *June 2016 – Present*
    - **Industrial Additive Manufacturing**: Enrolled in an Additive Manufacturing course in the Engineering department. Worked with industrial 3D printing systems (Stratasys PolyJet/Fortus) as well as hobbyist style printers.
    - **Hobbyist Printing**: Built and maintain my own DIY FDM and DLP printers.

PROJECTS

- **Reddit Front Page Predictor**: A two part project: (1) Reddit crawler to collect time series data into a PostgreSQL database on all posts in specified subreddits and (2) Machine Learning model to predict whether or not a post will eventually make it to the frontpage.
  https://github.com/mwong94/reddit
- **PDQ Android Game**: Developed a simple word game on Android built using Fragments, inspired by the card game PDQ. The game displays randomly generated problems, and provides solutions drawn from a SQLite database.
  https://github.com/mwong94/PDQFragment

SKILLS

- **Languages**: Python, Java, C, C++, R, Bash, JSON, XML, Perl, YAML

- **SQL**: MySQL, PostgreSQL, SQLite

- **Machine Learning**: scikit-learn, Keras/TensorFlow, CNN, Autoencoders

- **Operating Systems Experience**:

    - MacOS, Windows, UNIX (Linux and FreeBSD)

    - Extensive experience with Debian, RedHat families (e.g. rebuilt lab's Ubuntu GPU compute server while at NIMH)

    - Virtualization: QEMU, KVM, Xen, Proxmox, Docker

    - Self hosted GitLab/OpenVPN/OpenSSH Docker server

- **LaTeX**: This resume is in LaTeX (*https://github.com/mwong94/resume*)

- **Technologies**: AWS, GCE, Beowulf clusters