Matthew Francis-Landau

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Objective

To participate in cutting edge research in the fields of machine learning with applications to automatic programming.

Education

Third year undergraduate at UC Berkeley, Computer Science and Mathematics major.
Computer Science GPA: 3.7
High school at California Academy of Math and Science, unweighted GPA: 3.8.
Completed 50 college units during high school, currently completed 120.

Experience

Software Engineer, Balanced Payments, San Francisco CA   2013 - 2014
- Created specification and implantation of complete redesign of API.
- Developed machine learning and user tracking system to mitigate online credit card fraud.
- Created client library and documentation for interacting API.
- Developed framework for reconciling bank statements with individual transactions.

Technical Intern, Motion Picture Marine, Venice CA   Summer 2011
- Developed vibration detection and elimination method using fourier transformation and automatic PID gain adjustment.
- Debugged hardware and software issue relating to mass production of Perfect Horizon units.
- Co-authored grant to develop high school robotics program under Office of Naval Research (ONR).
- Designed technologies for remote internet connection and upgrades to in field units.

Leadership Experience

Project Manager, Red Inc.   2011-2012
- Led team of 15 high schoolers to develop spherical flying robot.
- Manufactured custom propellers to meet size requirements of 10 inches.
- Produced three different technical documents: Project proposal, Proof of concept, Manual/product documentation.

Projects

i-Lang   Summer 2012 to Today
- New programming language based around a function programming paradigm.
- Functions, classes, objects are viewed as "anonymous," variables only provided a means for accessing what was previously defined.
- Language was designed to study paradigm of self modifying code at a level higher than assembly.
- Features an integrated database for ease of use when working with data.
- Future plans for developing network distribution system to enable working with large data sets in parallel.

JSApp.us   November 2010 to Today
- First open registration Node.js hosting platform.
- Features online code editor and live online testing.

Computer Skills

Highly Proficient at:	C++, JavaScript, Python
Technologies:	Linux, Node.js, Scikit-Learn, SQLAlchemy, JSON Schema, PostgreSQL, Tokyo Tyrant, Arduino, Mbed, Mathematica, Hadoop, Java, LaTeX