

NATHAN DALY

Computer Science

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STATEMENT OF OBJECTIVE

Seeking a full-time position that enables me to utilize my passions for programming and human language in a fast-paced, motivated team -- working with and learning from talented, smart people.

EDUCATION

UNIVERSITY OF MICHIGAN, COLLEGE OF LITERATURE SCIENCE & THE ARTS

DECEMBER 2013

B.S. with High Honors in Computer Science, Minor in Chinese Language

- High Distinction (GPA 3.89); Phi Beta Kappa; Honors Program

Relevant Courses: Operating Systems (482), Object-Oriented Programming & Advanced C++ (381), Independent Study (detailed below), Computational Linguistics II, Computer Game Design (494)

BEIJING LANGUAGE AND CULTURE UNIVERSITY

JUN - AUG 2011

Study Abroad: Intermediate Chinese Language

SKILLS

C++

- High-level C++ ability: well-versed in the nuances and specifics of the C++ language and its history.

Python

- Moderate to advanced level ability. Experience with Flask, SciPy, NLTK, and other library modules.

Git / Mercurial / SVN

- Very comfortable with complex Git operations, and large-team version control in general.

Web Development

- Maintained and developed multiple ubuntu web servers using python, ruby, php, mysql, and vagrant.

Objective-C

- Experience developing with Macintosh Cocoa SDK and some experience with iOS SDK.

Foreign Language

- Advanced spoken Mandarin Chinese, Intermediate written Chinese; Basic written Arabic

WORK EXPERIENCE

NOVODYNAMICS INC.

MAY - AUG 2013

Software Engineering Intern

- Explored, implemented, and tested different Natural Language Processing algorithms for data analysis problems: i.e. Hidden Markov Models, Probabilistic Grammars, and search algorithms.
- Collaborated with team-mates to design a modern, object-oriented, C API to combine and expose existing product functionality.

MITRE CORPORATION

MAY - AUG 2012

Software Engineering Intern

- Worked in a team of 12 to design a universal test asset and software library for GPS software.
- Wrote low-level hardware driver for MITRE proprietary GPS signal-tracking hardware.
- Created network interface to GUI application, facilitating testing of hardware drivers.

RELEVANT EXPERIENCE

BACHELOR'S HONORS THESIS

SEP 2013 - DEC 2013

"Dynamically Registering C++ Exception Handlers:

Centralized Handling of C++ Exceptions in Application Framework Libraries"

- Authored a bachelor's thesis under Prof. David Kieras, Professor of Computer Science.
- Explored the range of exception handling solutions in current C++ GUI libraries.
- Presented a new, efficient solution for allowing a user to register C++ exception handler callbacks, which will be called if and only if an exception of a specific type is caught.

INSTRUCTIONAL AID FOR EECS 482 -- OPERATING SYSTEMS

JAN - APR 2013

- Taught a weekly discussion section applying lecture concepts to concrete problems.
- Held weekly office hours to address student questions and problems.
- Helped teams to debug projects, solve project problems, and understand course content.

COMPUTATIONAL LINGUISTICS INDEPENDENT STUDY -- EECS 498

AUG - DEC 2012

Modeling Second Language Learning as a Probabilistic Context-Free Grammar

- Researched with Prof. Steven Abney, Professor of Linguistics and Computer Science.
- Implemented EM Algo to dynamically build a grammar after each sentence heard from a speaker.
- Successfully builds Lexicon for both whitespace-delineated languages (e.g. French, Arabic) and non-whitespace-delineated languages (e.g. Chinese).

OTHER EXPERIENCE

DETROIT PARTNERSHIP TUTORING

SEP - DEC 2012

- Tutored fourth-grade children in need of individual attention once a week in math and reading.

FILM / COMMERCIAL ACTOR

2002 - PRESENT

- Performed roles in three full-feature films, multiple short-films, and several television commercials.