

DEREK TINGLE

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Education

Stanford University, Stanford, CA

September '11 - Present

- Master's Student at the Center for Computational Research in Music and Acoustics
- Relevant Coursework: Applications of the FFT, Digital Audio Effects, HCI Theory and Practice, Software Paradigms for Computer Music, Mobile Music, Mining Massive Datasets

Swarthmore College, Swarthmore, PA

August '06 - May '10

- Bachelor of Arts in Computer Science with a minor in Mathematics
- Relevant Coursework: Computer Perception, Information Retrieval, Natural Language Processing, Mathematical Statistics, Distributed Systems

Work Experience

Consultant, Imagine Research, Inc.

October '10 - Present

- Develop and test semantic audio analysis and music information retrieval systems
- Write scripts to mine audio content and metadata from the web
- Build and maintain a website for rapid hand labeling of audio

Teaching Assistant and Tutor, Computer Science Dept., Swarthmore College

August '09 - December '09

- Instructed students during class and led a weekly lab session for a course on Computer Organization
- Provided individual instruction for students outside of class

Research Experience

Natural Sciences and Engineering Fellowship, Swarthmore College, Swarthmore, PA

June '09–August '09

- Researched automatically annotating music using machine learning with Doug Turnbull
- Implemented Support Vector Machine, Boosted Decision Stump, and Gaussian Mixture Model Classifiers

REU Researcher, University of Oklahoma, Norman, OK

June '08 - August '08

- Extracted neural information from rats using machine learning algorithms
- Used Support Vector Machines to discriminate odors based on neural impulses from the olfactory cortex

Publications

1. D. Tingle, Y. Kim, and D. Turnbull. Exploring Automatic Music Annotation with "Acoustically Objective" Tags. *ACM International Conference on Multimedia Information Retrieval (ACM MIR)*, 2010.
2. B. Tomasik, J. Kim, M. Ladlow, M. Augat, D. Tingle, R. Wicentowski, and D. Turnbull. Using Regression to Combine Data Sources for Semantic Music Discovery. *International Symposium on Music Information Retrieval (ISMIR)*, 2009.

Posters and Conferences

1. Reverse Engineering the Music Genome: Automatically Tagging Music with Tags. *North East Music Informatics Special Interest Group (NEMISIG)*, 2010.
Consortium for Computing Sciences in Colleges (CCSC) Eastern Conference, 2009.
 - Won award for best student poster at CCSC
2. Decoding Odor from the Piriform Cortex of Rats Using a Free-Paced Classifier. *Society for Neuroscience Faculty for Undergraduate Neuroscience Poster Session*, 2008.

Skills

- **Human Languages:** Conversational Spanish
- **Computer Languages:** Arduino, C, C++, Chuck, Java, Javascript, \LaTeX , Matlab, MySQL, Objective C, PostgreSQL, Python, Pure Data, UNIX Shells