
MATTHEW J. HEMS

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EDUCATION

Binghamton University, State University of New York

Master of Science, Computer Science	expected 5/2017
Bachelor of Science, Computer Science, <i>summa cum laude</i>	5/2015
Bachelor of Arts, Mathematics, <i>summa cum laude</i>	5/2015
Member	ACM, Upsilon Pi Epsilon, Pi Mu Epsilon

RELEVANT SKILLS AND COURSE WORK

Programming Languages Python, Java, C++, C; familiarity with Ruby, Bash, Haskell
Courses include Compilers, Graph Theory, Machine Learning, Design Patterns

Dynamic Generic Map (C++ 11)

- Implemented growable, templated map similar to `std::map` using a binary search tree
- $O(\log n)$ average case lookup and insertion; bidirectional iteration provided

Decision Tree for Music Genre Classification (Python)

- Implemented pre and post pruned decision tree to decide genre given a song's acoustic features
- Harnessed 3rd party libraries pandas and pydot for data processing and visualization respectively

Compiler Semantic Checking (Java)

- Implemented passes for name resolution and type checking for Decaf subset of Java

Dynamic Memory Allocation (C)

- Implemented dynamic memory functions malloc, free, and realloc via doubly-linked free list
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EMPLOYMENT

Teaching Assistant	8/2015 – Present
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Binghamton University, Binghamton, NY

- Led weekly lab sections for students in *CS 140: Programming with Objects*
- Responsible for grading weekly assignments and labs and holding weekly office hours

College Technical Intern	6/2014 – 8/2015
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Lockheed Martin Mission Systems and Training, Owego, NY

- Targeted and optimized existing handwriting recognition algorithms
- Tuned performance of existing mailpiece algorithms to increase finalizations and reduce error

Summer Camp Assistant Supervisor	6/2013 – 8/2013
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Summer Camp Counselor	6/2012 – 8/2012
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Perinton Recreation and Parks, Fairport, NY

- Managed and planned daily camp operations for 80 campers, ages 5 to 13
 - Conducted regular staff performance evaluations for 7 site counselors
 - Wrote weekly newsletters to parents
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EXTRACURRICULAR ACTIVITIES

Hinman College Council of Binghamton University, Binghamton, NY

Hughes Dormitory Hall Co-President	9/2012 – 5/2013
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- Coordinated with 8 executive board members to plan and execute community and hall wide events

Eagle Scout	12/2008
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