

Brandon Richard Webster

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Education

2015-Present	PH.D. in Computer Science & Engineering Adviser: Prof. Walter J. Scheirer	University of Notre Dame, IN
2010-2015	B.S. in Computer Science	Bethel University, MN

Research Interests

Primary interests in Machine Learning, Deep Learning, Computer Vision, and Visual Psychophysics. Specific areas of interest include Psychophysics driven Machine Learning, and Machine Learning for Ecology and Agriculture.

Work Experience

2015-Present	Graduate Research Assistant Computer Vision Research Lab	University of Notre Dame, IN
2017-2018	Solution Architect Boon Logic	Bloomington, MN
2014-2015	Software Engineer Intern Optimine Software, Inc.	Maverick Software Consulting, MN
2014-2015	Computer Science and Mathematics Tutor Dept. of Mathematics and Computer Science	Bethel University, MN
2013-2015	Computer Science Teacher's Assistant Dept. of Mathematics and Computer Science	Bethel University, MN
2014	Undergraduate Research Assistant Dept. of Mathematics and Computer Science	Bethel University, MN
2010-2014	Student Manager II Information Technology Services	Bethel University, MN

Publications

JOURNAL ARTICLES

June 2018	B. RichardWebster, S. E. Anthony, W. J. Scheirer, "PsyPhy: A Psychophysics Driven Evaluation Framework for Visual Recognition," accepted for publication in <i>IEEE Transactions on Pattern Analysis and Machine Intelligence (T-PAMI)</i> .
Jan 2016	B. Turnquist, B. RichardWebster, B. Namer, "Automated detection of latency tracks in microneurography recordings using track correlation," appears in <i>Journal of Neuroscience Methods (JNM)</i> , Vol 262., Pages 133-141.

REFEREED CONFERENCE PAPERS

- Sept 2018 B. RichardWebster, S. Y. Kwon, C. Clarizio, S. E. Anthony, W. J. Scheirer, “Visual Psychophysics for Making Face Recognition Algorithms More Explainable,” presented at the *15th European Conference on Computer Vision (ECCV 2018)*, Munich, Germany.
- March 2018 S. Banerjee, J. Brogan, J. Krizaj, A. Bharati, B. RichardWebster, V. Struc, and W. J. Scheirer, “To Frontalize or Not To Frontalize: Do We Really Need Elaborate Pre-Processing to Improve Face Recognition Performance?,” appears in the Proceedings of the *IEEE Winter Conference on Applications of Computer Vision (WACV 2018)*, Lake Tahoe, NV, USA.
- Sept 2016 W. J. Scheirer, P. Flynn, C. Ding, G. Guo, V. Struc, M. Al Jazaery, K. Grm, S. Dobrisek, D. Tao, Y. Zhu, J. Brogan, S. Banerjee, A. Bharati, and B. RichardWebster, “Report on the BTAS 2016 Video Person Recognition Evaluation,” appears in the proceedings of the *IEEE International Conference on Biometrics: Theory, Applications, and Systems (BTAS 2016)*, Niagra Falls, NY, USA.

Grants, Awards, & Honors

- 2016 NSF Graduate Research Fellowship Program (\$138,000/3 years).
- 2014 Math & CS Department Summer Research Endowment Grant (\$4,000).
- 2014 Faculty (Academic) Scholarship (\$1,250).
- 2014 JACOL Computer Science Scholarship (\$300).
- 2013 Bonnie E Goodwin Memorial Scholarship (\$400).
- 2011 Mildred M Widen Memorial Scholarship (\$800).
- 2010 Faculty (Academic) Scholarship (\$10,000/4 years).
- 2010 Minnesota Achievement Scholarship (\$1,350).
- 2010 Academic Competitiveness Grant (\$750).

Professional Activities

PROFESSIONAL AND ACADEMIC MEMBERSHIP

Student Member of the IEEE, and The Computer Vision Foundation.

ACADEMIC SERVICE

- 2014-2015 Student Chair, Association for Computing Machinery (ACM) Student Chapter

Invited and Refereed Talks

- Sept 2018 “Visual Psychophysics for Machine Learning,” invited talk at the *IEEE 27th International Electrotechnical and Computer Science Conference (ERK 2018)*, Portorž, Slovenia.
- Sept 2017 “Deep Learning / AI”, invited talk at Bethel University, sponsored by *Association for Computing Machinery* Student Chapter, Arden Hills, MN, USA.
- June 2017 “Deep Learning / AI”, invited talk at Bethel University, sponsored by Bethel University’s Board of Trustees, Arden Hills, MN, USA.
- June 2017 “Bethel’s Impact on Me”, invited talk at Bethel University, sponsored by Bethel University’s Board of Trustees, Arden Hills, MN, USA.
- June 2017 “Anomaly Detection”, invited talk at Bethel University, sponsored by Bethel University’s Board of Trustees, Arden Hills, MN, USA.
- May 2017 “Towards an Artificial Brain”, invited talk at Bethel University, sponsored by *Association for Computing Machinery* Student Chapter, Arden Hills, MN, USA.
- Feb 2015 “Angular.js Web Development”, undergraduate talk at Bethel University, sponsored by *Association for Computing Machinery* Student Chapter, Arden Hills, MN, USA.

- Oct 2014 “Scratching where it Itches: Tracking a single neuron in noise”, spotlight talk at Bethel University, sponsored by Bethel University Department of Mathematics & Computer Science, Arden Hills, MN, USA.
- July 2014 “Multiple Hypothesis Tracking in Microneurography”, spotlight talk at Bethel University, sponsored by Bethel University Summer Research Faculty, Arden Hills, MN, USA.

Student Advising

UNDERGRADUATE ADVISING

- Fall 2017 Anthony DiFalco (Notre Dame, Independent Study)
 Fall 2017 Elisabetta Caldesi (Notre Dame, Independent Study)
 Spring 2017 So Yon Kwon (Notre Dame)
 Spring 2017 Christopher Clarizio (Notre Dame, Independent Study)

HIGH SCHOOL ADVISING

- 2017-2018 Christopher Norton (Nova Classical Academy, Best Thesis winner)

Press Coverage

- Jan 2018 “Brokenness Transformed”, appeared in Bethel University News.

Technical Skills

PROGRAMMING LANGUAGES

Python, C/C++, CUDA, Mathematica, SQL, Java, Matlab, OpenGL/OpenGlut, Flex/Bison.

DEVELOPMENT FRAMEWORKS

Keras, Tensorflow, PyTorch, OpenCV, OpenBR.

OPERATING SYSTEMS

Ubuntu Linux (5+ years).

WEB DEVELOPMENT

Flask, HTML, CSS, jQuery.js, Bootstrap, Angular.js, D3.js, PHP.

DOCUMENT PUBLISHING

L^AT_EX, Google Docs, Microsoft Office.

OTHER

Amazon Mechanical Turk, FaceGen, DirectStream.

Biographical Information

CITIZENSHIP

United States.

HOBBIES

Literature, Running, Traveling, Bowling, Cinema.