

# BENJAMIN E. SHANAHAN

Class of 2017, Sc. B. in Neuroscience with Honors, Magna Cum Laude, Brown University

Class of 2013, Boston Latin School

*Curriculum Vitae*

August 2017

## Contact Information

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## Work Experience

2017 - Present	<b>Computer Programmer</b>	BrainGate, Brown University, Providence, RI
	Work on development of new embedded computing systems to improve the speed and size of modern brain-computer interface systems. Code development in the C programming language. Supervisors: Dr. Leigh Hochberg & Dr. John Simeral	
2016 - 2017	<b>Research Assistant</b>	BrainGate, Brown University, Providence, RI
	Implemented Kalman filter in closed-loop auto-updating brain-computer interface (BCI) calibration system. Honors thesis research in idle state detection in BCIs. Supervisors: Dr. Leigh Hochberg & Dr. David Brandman	
2015 - Present	<b>Research Assistant</b>	Omarlab, Brown University, Providence, RI
	Analyzed shape of brain rhythms in running rats to evaluate usefulness as analytical metric. Work on figures and logic for first-author journal article. Developed Matlab toolbox for shape analysis. Shadowed epileptologist at Rhode Island Hospital. Supervisor: Dr. Omar Ahmed	
2014 - Present	<b>Matlab Consultant</b>	Burwell Lab, Brown University, Providence, RI
	Write desired Matlab code for analyses and/or data processing. Attend lab meetings. Supervisor: Dr. Rebecca Burwell	
Summer 2014, 2013	<b>Research Assistant</b>	Cashlab, Massachusetts General Hosp., Boston, MA
	Developed affordable OpBox rat operant conditioning chamber with Dr. Eyal Kimchi. Developed Semiology Diagnostic Tool to objectively diagnose region of seizure onset and settle conflicts during surgical meetings. Developed Matlab code to detect high-frequency oscillations in epilepsy data. Supervisors: Dr. Sydney Cash & Dr. Brandon Westover	
Summer 2012	<b>Tech Apprentice</b>	State Street Corp., Quincy, MA
	Summer intern in the Flexible Work Department. Documented, troubleshooted, maintained, & analyzed data from internal FlexTrax website. Designed and programmed time-saving macro for pulling reports in Visual Basic. Helped solve user issues, fix bugs, & document FlexTrax web tool. Manager: Chris Siclari	

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## Honors & Awards

2017	<b>Sc. B. in Neuroscience with Honors, Magna Cum Laude</b>	Brown University
2015	<b>Matthew Siravo Undergraduate Award in Epilepsy</b>	Brown University
2013	<b>Campbell Medal</b>	Boston Latin School
2013	<b>T. Vincent Learson Scholarship</b>	Boston Latin School
2013	<b>Horace M. Chadsley '14 Scholarship</b>	Boston Latin School

2012	<b>National Honor Society</b>	Boston Latin School
2010-12	<b>Francis Gardner Prize for Excellence in Modern Studies</b>	Boston Latin School

## Abstracts

2015	<b>Society for Neuroscience</b> Chicago <i>OpBox: Open-source development of customized and cost-effective hardware and software for behavioral neurophysiology.</i> Brian F. Coughlin, <b>Benjamin E. Shanahan</b> , Giovanni Piantoni, Sydney S. Cash, Eyal Y. Kimchi.
2014	<b>American Epilepsy Society</b> Washington, DC <i>Human Single Neuron Correlates Of High Frequency Oscillations During Seizures.</i> Omar J. Ahmed, Mark A. Kramer, Jason S. Naftulin, <b>Benjamin Shanahan</b> , Emad N. Eskandar, Rees Cosgrove, N. Stevenson Potter, Andrew Blum, Leigh Hochberg, Sydney S. Cash.

## Skills & Interests

Research	Organization and analysis of massive multi-day, multi-subject data sets.
Code	Highly proficient in C. Advanced knowledge of Matlab. Advanced knowledge of object-oriented programming techniques in Python, ActionScript 3, Java. Advanced knowledge of web design and maintenance.
Computers	Advanced knowledge of Adobe Software Suite, Microsoft Office. Advanced knowledge of troubleshooting hardware & software issues in Windows and Linux.
Projects	Developed an autonomous drone delivery service with integrated web-app. Developed audio visualizer for making parties more exciting. Developed rocket flight computer with logging and rotational sensors to deploy a parachute at apogee. Co-founded and ran an art-centric club at University for 2.5 years. More information on my website (bshanahan.info).
Language	Fluent in English; French conversational, reading, and writing skills; Spanish reading and writing skills; study of Latin
Personal	Highly organized, motivated, responsible, and resourceful. Team leader and collaborator. Perseverant and committed to projects. Creative and efficient problem solver. Not afraid to ask for help when necessary. Able to self-teach new concepts quickly and effectively.