










Ellis L. Brown II*Curriculum Vitae*

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RESEARCH INTERESTS	Deep Learning • Artificial Intelligence • Computer Vision • Machine Learning Cognitive Science • Neuroscience • Brain-Computer Interfaces		
EDUCATION	Vanderbilt University , Nashville, TN <i>Bachelor of Science</i> , Computer Science <i>Bachelor of Arts</i> , Mathematics	Aug 2013 – May 2017	
ADVANCED COURSEWORK	Machine Learning • Artificial Intelligence • Web-based System Architecture • Big Data Computer Networks • Coding Theory & Cryptography • Number Theory • Algorithms Probability & Statistics • Program Design & Data Structures		
PROGRAMMING SKILLS	<i>Languages:</i> Python • JavaScript • Java • MATLAB • TypeScript • C++ • Bash • \LaTeX <i>Frameworks:</i> PyTorch • Torch • SKLearn • NLTK • AWS • Angular2 • Node.js • git		
RESEARCH EXPERIENCE	<i>Research Assistant</i> Jan 2017–present Artificial Intelligence and Visual Analog Systems Lab , Vanderbilt University School of Engineering – Nashville, TN <ul style="list-style-type: none">• Researcher on NSF funded project, "A New Computational Cognitive Architecture to Model Human Visual Search for Spatiotemporal Targets," under Dr. Maithilee Kunda, with Dr. Adriane E. Seiffert.• Lead author on paper being submitted to AAAI-18 Conference Sep 2017• Giving oral presentation at AISES National Conference Sep 2017		
OPEN SOURCE EXPERIENCE	SSD.PyTorch GitHub:// amdegroot/ssd.pytorch  18  289  81 Mar 2017–present PyTorch Implementation of Single Shot MultiBox Detector <ul style="list-style-type: none">• Worked with Max de Groot to implement and maintain a PyTorch version of the unified framework for real-time object detection using a single network outlined in Wei Liu's paper [arXiv:1512.02325v5]• Made the code clear, concise, and as true-to-the-paper as possible with extensive documentation and commenting. Snippets are cited by multiple online textbooks & blogs • Medium • L. Santos AI GitBook • The Incredible PyTorch DeepGenres.Torch GitHub:// amdegroot/deepgenres.torch May 2017 Deep convolutional neural network for audio classification of music genres.		
TEACHING EXPERIENCE	<i>Teaching Assistant and Grader</i> , under Dr. Jerry Roth Fall 2015 Program Design & Data Structures , Vanderbilt University School of Engineering – Nashville, TN <ul style="list-style-type: none">• Debugged and assessed weekly programming assignments and exams• Held weekly office hours for class of 160+ students.		

PROFESSIONAL EXPERIENCE	<i>Software Engineering Analyst</i>	Jul 2017–present
	BlackRock , Aladdin Product Group, Core Data Team – New York, NY	
	<i>Software Engineering Intern</i>	Summer 2016
	BlackRock , Aladdin Product Group – New York, NY <ul style="list-style-type: none"> • <i>Full-Stack Developer</i> – Wrote Angular2 webapp for Cash Reconciliation Rule Management using TypeScript with SpringMVC Java back-end. • <i>Intern Hackathon Winner</i> (Team of 4) – Structuring Unstructured Data at Scale PDF Parsing, NLTK Named Entity Recognition, SKLearn Decision Tree prediction, Angular2 web interface 	
	<i>Software Engineering Intern</i>	Summer 2015
	Exegy , Real Time Market Data Solutions – Saint Louis, MO	
	<ul style="list-style-type: none"> • Overhauled Data Entitlements system with Python script to populate SQL db 	
COMMUNITY SERVICE	<i>Volunteer, Come to Me Campaign</i>	
	<ul style="list-style-type: none"> • Brought Come to Me Campaign to BlackRock 	Sep 2017
	Distributing hundreds of wristbands to co-workers	
	<ul style="list-style-type: none"> • Distributed over 7,000 wristbands on Vanderbilt's campus to raise mental health awareness during National Suicide Prevention Week 	Sep 2016
	<i>Volunteer, Manna Project International, Corozal Town, Belize</i>	Mar 2016
	<ul style="list-style-type: none"> • Constructed a new house for Jacob's Farm, the country's only drug and alcohol rehabilitation farm in a rural village called Patchakan • Worked with Dolly Parton's Imagination Library to give out educational materials to young mothers in Patchakan 	
EXTRA- CURRICULAR ACTIVITIES	<i>Tour Guide, Vanderbilt Admissions</i>	2014-16
	Elected <i>Captain & President</i> , Vanderbilt Water Polo Club	2014-16
	<ul style="list-style-type: none"> • SEC Champions, competed in CWPA National Championship 	2014
	Elected <i>Social Chairman</i> , Kappa Sigma Fraternity — Kappa Chapter	2014-16
	<ul style="list-style-type: none"> • Managed \$45k semi-annual budget; served on chapter's Executive Council • Selected to represent Kappa Chapter at: 	
	Kappa Sigma National Leadership Conference	Summer 2014
	Vanderbilt Greek Emerging Leaders Program	Fall 2014
	USA Water Polo	2010-13
	<ul style="list-style-type: none"> • Junior Olympics 	2012, 2013
	<ul style="list-style-type: none"> • Olympic Development Program 	2010-13
AWARDS	1 st BlackRock NYC Intern Hackathon	2016
	<i>Finalist</i> , BlackRock Founder's Scholarship	2016
	<i>Finalist</i> , Google Lime Scholarship	2016
	<i>Finalist</i> , Lime Connect Fellowship	2015
	<i>All-Conference</i> , SEC Second Team, Water Polo	2014
	<i>Academic All-American</i> , USA Water Polo	2012, 2013
SOCIETIES	American Indian Science and Engineering Society (AISES)	
	Lime Connect Network for Students with Disabilities	
	Alliance for Students with Disabilities in STEM (AccessSTEM)	
	USA Water Polo Olympic Development Program	