Ellis L. Brown II

Curriculum Vitae

CONTACT INFORMATION

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ellisbrown

substitution

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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 Bachelor of Science, Computer Science

Aug 2013 – **May 2017**

Bachelor of Arts, Mathematics

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

Languages: Python • JavaScript • Java • MATLAB • TypeScript • C++ • Bash • Languages: PyTorch • Torch • SKLearn • NLTK • AWS • Angular2 • Node.js • git

RESEARCH EXPERIENCE

Research Assistant

Jan 2017-present

Artificial Intelligence and Visual Analog Systems Lab, Vanderbilt University School of Engineering – Nashville, TN

- 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
 Giving oral presentation at AISES National Conference
 Sep 2017
 Sep 2017

OPEN SOURCE EXPERIENCE

SSD.PyTorch GitHub:// amdegroot/ssd.pytorch ● 18 ★ 289 № 81 Mar 2017—present PyTorch Implementation of Single Shot MultiBox Detector

- 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 Al GitBook The Incredible PyTorch

DeepGenres.Torch GitHub:// amdegroot/deepgenres.torch May 2017 Deep convolutional neural network for audio classification of music genres.

TEACHING EXPERIENCE

Teaching Assistant and Grader, under Dr. Jerry Roth

Fall 2015

Program Design & Data Structures, Vanderbilt University School of Engineering – Nashville, TN

- Debugged and assessed weekly programming assignments and exams
- Held weekly office hours for class of 160+ students.

PROFESSIONAL EXPERIENCE

Software Engineering Analyst

Jul 2017–present

BlackRock, Aladdin Product Group, Core Data Team - New York, NY

Software Engineering Intern

Summer 2016

BlackRock, Aladdin Product Group - New York, NY

- Full-Stack Developer Wrote Angular2 webapp for Cash Reconciliation Rule Management using TypeScript with SpringMVC Java back-end.
- Intern Hackathon Winner (Team of 4) Structuring Unstructured Data at Scale PDF Parsing, NLTK Named Entity Recognition, SKLearn Decision Tree prediction, Angular2 web interface

Software Engineering Intern

Summer 2015

Exegy, Real Time Market Data Solutions - Saint Louis, MO

• Overhauled Data Entitlements system with Python script to populate SQL db

COMMUNITY SERVICE

Volunteer, Come to Me Campaign

Brought Come to Me Campaign to BlackRock Sep 2017
 Distributing hundreds of wristbands to co-workers

 Distributed over 7,000 wristbands on Vanderbilt's campus to raise mental health awareness during National Suicide Prevention Week

Volunteer, Manna Project International, Corozal Town, Belize

Mar 2016

- 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

Tour Guide, Vanderbilt Admissions	2014-16
Elected Captain & President, Vanderbilt Water Polo Club	2014-16
 SEC Champions, competed in CWPA National Championship 	2014

SEC Champions, competed in CWPA National Championship

Elected Social Chairman, Kappa Sigma Fraternity — Kappa Chapter 2014-16

• 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

• Junior Olympics 2012, 2013

• Olympic Development Program 2010-13

AWARDS 1st BlackRock NYC Intern Hackath

1 st BlackRock NYC Intern Hackathon	2016
Finalist, BlackRock Founder's Scholarship	2016
Finalist, Google Lime Scholarship	2016
Finalist, Lime Connect Fellowship	2015
All-Conference, SEC Second Team, Water Polo	2014
Academic All-American, 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