

# HAYDEN SCOTT

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## Graduate Student

I received my BS in Neuroscience with a minor in biochemistry from the University of Kentucky. My research interests include understanding the neural substrate of attention, working memory, and decision making. I started out in the lab of Associate Vice President for Research at the University of Kentucky, Dr. Craig Rush, and began my research career working with humans. Afterwards, I switched to rodent models, using in-vivo Micro Electrode Array (MEA) technology for measuring glutamate dynamics in models of addiction. From there, I moved to Sweden for one year to work under Dr. Konradsson-Geuken and Erika Roman in order to further my mastery of biosensor technology. After graduating I was accepted into the Brain and Cognitive science PhD program at the University of Rochester, working under Dr. Adam Snyder. My current work combines artificial intelligence with neural population recordings to study how the brain processes visual information in rhesus macaque.

### AREAS OF EXPERTISE

**Animal Husbandry**  
**Programming**  
**Electrophysiology**  
**Redox Chemistry**

**Drug Preparation and Administration**  
**Amperometry**  
**Surgical technique**  
**Visual processing**

## PROFESSIONAL HISTORY

### SNYDER COMPUTATIONAL NEUROSCIENCE LAB | 2018 - PRESENT

#### Graduate Student

#### Rochester, NY

- I am currently working on a PhD in computational neuroscience under Dr. Adam Snyder at the University of Rochester. I use latent variable models along with artificial neural networks to investigate feature-based attention in both humans and rhesus macaque. I also investigate neural population dynamics using chronic microelectrode array implants with simultaneous EEG recordings.

### ROMAN PHARMACOLOGY LAB | 2016 - 2017

#### Student Researcher

#### Uppsala, Sweden

- While living in Sweden, I worked in the lab of Dr. Erika Roman with Dr. Åsa Konradsson-Geuken. I was enrolled in a masters course in the pharmaceutical biosciences department and worked with the multivariate concentric square field (MCSF) behavioral arena. I also set up and validated enzyme-coated biosensor recordings in anesthetized rodents for their lab. While there I became certified to work with rodents and lagomorphs within the EU, and also coauthored a paper regarding sex-dependent differences in alcohol consumption between two housing setups in wistar rats that is currently undergoing revision.

### DR. BECKMANN'S BEHAVIORAL NEUROSCIENCE LAB | 2014 - 2016

#### Laboratory Technician

#### Lexington, KY

- As the PI of a start-up lab, Dr. Joshua Beckmann was looking to expand by enlisting the help of qualified interns. While taking a full class load, I worked with the Beckmann lab, doing everything from building micro-electrodes, to handling and working with the rats, and even assisting on various surgeries. I worked closely with graduate student Seth Batten, often helping him with his studies on neural mechanisms of economic decision making. After earning all allotted credit hours, Dr. Beckmann decided to hire me as a Laboratory Technician for over the summer of 2015. I

continued to work as a laboratory technician through the summer of 2016 when I moved to Sweden for a laboratory position.

## SUMMER TRAINING IN ALCOHOL RESEARCH (STAR) | SUMMER 2014

### Student Intern

#### Lexington, KY

- I spent the summer working with alcohol, cocaine, and opium addicts on a personal level. I conducted phone interviews and worked on a theoretical level with post-doc Dr. Levi Bolin on his work with gambling addiction. In this lab, I assisted his research with a focus on perception, attention, impulsivity and other psychological constructs. At the end of this program, students made a presentation on the research they conducted, as if presenting to a formal conference of the scientific community. I did my presentation on impulse control disorders, attentional bias, probabilistic decision making, and pathological gambling.

## SELECTED ACHIEVEMENTS

### DEANS LIST

- I was a Deans list honor student nearly every semester, throughout my undergraduate career. This is a testament to my level of commitment to learning and pursuing a career in the academic sciences.

### UNIVERSITY OF KENTUCKY ARTS AND SCIENCES AMBASSADOR 2015-2016

- I was selected to represent the University of Kentucky's college of arts and sciences as an A&S Ambassador. I was the face of UK to other colleges and high schools and am highly involved in the new student recruitment process. I learned much about working within a diverse group to enact change on campus.

### NRT-DESE 2018-2019

- The NSF research traineeship in data-enabled science and engineering (NRT-DESE) is a prestigious program, and I was one of a select few graduate students awarded a spot. The program focused on training in data-enabled research into human behavior and its cognitive and neural mechanisms. The program provided me with research experience at the intersection of neuroscience, computer science, and data science.

## EDUCATION & HONORS

**Bachelor of Science: Neuroscience;** University of Kentucky (05/2018)

**Masters courses in Pharmaceutical Sciences;** Uppsala Universitet (55 ECTS credits)

**PhD, Brain and Cognitive Science;** University of Rochester (23 credit hours)

**NeurIPS conference attendance;** 2018

**Cosyne conference attendance;** 2019