Chuu Nyan

(512)-699-6733 chuu.nyan@utexas.edu www.linkedin.com/in/chuu-nyan
Austin, Texas 78705.

Academic Degrees

The University of Texas at Austin **August 2021 - May 2023**
Bachelor of Science in Neuroscience

Austin Community College **December 2017 - December 2020**
Associate of Science in Biology

Computation Skills

- EEGLAB in MATLAB for ERP, ICA, and Montecarlo/Permutation test
- Linux for preprocessing fMRI data
- R Studio for correlation analysis, regression analysis
- Psychopy
- REDCap data management
- JASP
- Miniconda
- Microsoft office
- Airtable

Certificates and Awards

Bridging Disciplinary Program **August 2021 - May 2023**
(Children and Society Strand)

Roy F. & Joann Cole Mitte Endowed Scholarship **August 2020**

Mary E. Thompson Scholarship **April 2019**

Research Interests

- Learning intervention for low SES/less-advantaged families at early developmental stages
- Academic achievement in different learning environments (school, home, camp, etc)
- Investigating education policies & intervention for children from underserved communities
- Executive function and learning development in early childhood with or without adverse life events
- Using neuroimaging methods (EEG, fMRI, etc.) to investigate cognitive development

Research Experiences

The Developmental Cognitive Neuroscience Lab **June 2023 - Present**
Lab Manager, PI: Dr. Jessica Church-Lang

- Managed participant recruitment, organized the RedCap database, managed IRB, and performed administrative duties.
- Conducted behavioral and fMRI data collection visits using PsychoPy. I'm also certified to run Siemens 3T Vida FMRI scans.
- Hired, trained, and coordinated daily tasks for undergraduate research assistants to conduct behavioral visits, data scoring, and data entry.
- Administered behavioral tests; computer tasks (cognitive flexibility, inhibition, & working memory tasks) & paper tasks (WASI, KTEA, TOSREC, WISC, Animal Stroop, Local Global)
- Created project summaries and analyzed summer activity reports in RStudio.
- Presented a poster at the 2024 FLUX Conference in Baltimore.

The Memory and Aging Lab **August 2022 - Present**
Research Assistant, PI: Dr. Audrey Duarte

- Assisted in collecting data from 18- to 80-year-old participants utilizing EEG and fMRI imaging methods.
- Administered behavioral tests; Trail Making Test (TMT), Digit Span Memory test, and California Verbal Learning Test (CVL-T)
- Conducted principal component analysis in Rstudio using sleep data tracked by sleep-monitoring watches.
- Preprocessed EEG recordings using EEGLAB from the MATLAB software and the associated behavioral data for 60 participants.
- Employed linear regression analysis to examine variability among sleep components, I found sleep variability and its association with age.
- Presented a poster at the SLEEP 2024 Conference in Houston and Cognitive Neuroscience Society Conferences in Boston.
- Currently working on publishing it in an academic journal.

Neurological Genetic Disease Lab Course **January 2023 - April 2023**
Undergraduate Student, Professor: Dr. Jonathan Pierce

- Worked directly under the supervision of Dr. Jonathan Pierce to explore the genetic underpinnings of neurological disorders.
- Utilized C. elegans nematodes to induce stress and study stress-induced fertility and egg-laying behaviors.
- Demonstrated that exposure to stress significantly reduced fertility rates in stress-susceptible C. elegans.

Project Seed **January 2022 - May 2022**
Head Research Assistant, PI: Dr. Su Yeong Kim

- Served as one of the lead research assistants and oversaw the resolution of behavioral data inconsistencies within both RedCap and Airtable.
- Developed and implemented comprehensive protocols covering various tasks, including updating Airtable databases, organizing daily shifts for research assistants (RAs), monitoring training progress, conducting recruitment activities, and assigning tasks.

Neuroscience Undergraduate Reading Program (NURP) **February 2022 - May 2022**
Mentee
The University of Texas Austin

- Conducted a careful in-depth literary analysis of scientific articles and explored them weekly with my mentor.
- Presented a 15-minute presentation at the NURP Symposium 05/05/2022 on literary review on different neuroimaging techniques used in current cognitive science.

Work Experiences

The Child Development Center **January 2023 - May 2023**
Teaching Assistant
The University of Texas Austin
University Recreational Sports Center **June 2022 - December 2022**
Aquatic Swim Instructor
The University of Texas Austin

Manuscripts and Publications

*** = First Author**

1. **Nyan C.***, Ram S., Wachnin A., Mirjalili S,. Duarte A. (in preparation). Individual differences in habitual sleep discontinuity predict memory consolidation and supporting neural activity.
2. **Nyan C.***, Nguyen T.Q., Painter C.M., Porter B.M., and Church J.A. (in preparation) Exploring the interplay between family socioeconomic status, children's summer activities, and executive functions.
3. Porter B.M.*, Painter C.M., **Nyan C.**, Davis B.R., Garza A.C., Church J.A. (in preparation). Academic Change Over Summer Break Depends on Prior Achievement and Attention-Deficit/Hyperactivity Disorder Symptom Burden.

Presentations

Meeting Presentations

1. *Exploring the interplay between family socioeconomic status, children's summer activities, and executive functions.* University of Texas at Austin, Developmental Psychology Area Meeting. Sept. 2024.
2. *Individual differences in habitual sleep and its influence on episodic memory consolidation and neural mechanism supporting successful memory retrieval.* Research Flash Talk at the Texas Aging & Longevity Consortium at the University of Texas at Austin. Feb. 2024.

Poster Presentations

1. **Nyan C.*,** Ram S., Wachnin A., Seraji M., Mirjalili S., Duarte A. Sleep efficiency during the retention period predicts episodic memory reconstruction across young and old adults. Cognitive Neuroscience Society Conference; April 2025; Boston, MA.
2. **Nyan C.,** Ram S.*, Wachnin A., Seraji M., Mirjalili S., Duarte A. Sleep efficiency during the retention period predicts associative memory consolidation in young and old adults. Dallas Aging and Cognition Conference; February 2025; Dallas, TX.
3. Painter, C.M.*, Porter, B.M., Nyan, C., & Church, J.A. (October 2024). The relationship between reading skills, reading skill change, and executive function in youth. Poster presentation at ARMADILLO Conference 2024.
4. **Nyan C.***, Nguyen T., Painter C.M., Porter B.M., and Church J.A. Exploring the interplay between family socioeconomic status, children's summer activities, and executive functions. 2024 FLUX Congress; September 2024; Baltimore, MD.
5. Porter B.*, Nugiel T., Demeter D., **Nyan C.**, Church J. Functional Connectivity During Academic, EF, and Rest States in Youth. 2024 FLUX Congress; September 2024; Baltimore, MD.
6. **Nyan C.***, Ram S., Chhabra I., Wachnin A., Mirjalili S., Duarte A. Individual differences in habitual sleep discontinuity predict memory consolidation and supporting neural activity. Sleep 2024 Conference; June 2024; Houston, TX.