

# MISCHA GUSHIKEN (YURI)

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## EDUCATION

**Columbia University, Teachers College**, New York, NY

*May 2023 - May 2025*

*Master of Arts in Educational Technology Specialist*

GPA: 4.0/4.0

*Capstone Portfolio/Integrative Project:* Includes curriculum unit design, technology planning, and research paper "AI-Enhanced Oral Assessors"

Advisor: Prof. Ellen B. Meier

**University of California, Davis**, Davis, CA

*January 2009 - December 2010*

*Bachelor of Arts in Political Science*

GPA: 3.65/4.0

Minor Concentration: History

## RESEARCH INTERESTS

Numerical Cognition, Event Representation, Cognitive Development, Cognitive Neuroscience Methods (EEG, Eye-Tracking), Computational Modeling / Machine Learning

## RESEARCH EXPERIENCE

**Language and Cognitive Neuroscience Lab**, Teachers College, Columbia University, New York, NY

*August 2024 - Present*

*Research Assistant*

*Lab Director: Prof. Peter Gordon*

### Project 1: Eye-Track-ML Machine Learning Feature Extraction Pipeline

- *Supervisor: Prof. Peter Gordon*
- Developed and lead-authored an automated eye-tracking video analysis pipeline (Python) using machine learning (ML/RL approaches) for large-scale datasets (>600,000 frames).
- Presented Eye-Track-ML project as invited guest lecture (with Y. Li) in BBSN 5022: Eye-Tracking & Dynamic Data Analysis (March 2025).
- Project in progress with manuscript in preparation.

### Project 2: Infant Event Representations Study

- *Supervisor: Prof. Peter Gordon*
- Led data processing efforts using the Eye-Track-ML/RL pipeline.
- Applied automated pipeline to process large-scale infant eye-tracking dataset (>600,000 frames).
- Collaborated with Y. Li on subsequent data analysis.

### Project 3: EEG Numbers Study

- *Lead Researcher: Dr. Jean Tang; Lab Director: Prof. Peter Gordon*
- Interpreted data analysis results from study investigating electrophysiological responses to numerical stimuli.
- Contributed to manuscript and poster content preparation through data interpretation and editing.

## PUBLICATIONS

### Manuscript in Preparation

Gushiken, M., et al. **Eye-Track-ML/RL: A Machine Learning Pipeline for Automated Eye-tracking Video Analysis with Reinforcement Learning Components**. Target Journal TBD.

## CONFERENCE PRESENTATIONS

Gushiken, M., Li, Y., Tang, J. E., Gordon, P. (March 4 & April 2, 2025). **Eye-Track-ML: A Machine Learning Pipeline for Automated Frame-by-Frame Coding of Eye-Tracking Videos**. Poster presented at the Columbia AI Summit, New York, NY and Columbia Data Science Day, New York, NY.

Tang, J. E., Li, Y., Smith, P., Spitzmueller, J., Gushiken, M. (Yuri), Tobing, C., Gordon, P. (March 29 - April 1,

2025). **Electrophysiological and Behavioral Indices of Numerical Perception and Cognition**. Poster presented at the Cognitive Neuroscience Society (CNS) Annual Meeting, Boston, MA.

## TEACHING EXPERIENCE

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**Teachers College, Columbia University**, New York, NY  
**Teaching Practicum in Educational Technology**

*Fall 2024 – Spring 2025*

- Co-taught technology lessons (e.g., AI with Teachable Machine, computational thinking with Turtle Art) to K-12 students (e.g., 4th grade) integrating NYS Computer Science standards.
- Collaborated with mentor teachers to plan and implement technology-enhanced instruction.
- Supported educators in exploring and using educational technology tools effectively in the classroom.

## PROFESSIONAL EXPERIENCE

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**Wall Street English**, Bangkok, Thailand  
**Service Manager / EFL Consultant**

*October 2018 – May 2023*

- Managed team scheduling, weekly meetings, staff hiring/onboarding (7 hires), and training.
- Taught business English, technology applications, IELTS, and TOEIC to adult learners.
- Conducted corporate training on leadership, service delivery, and performance feedback.

**E.C.C. Thailand**, Bangkok, Thailand  
**Head Teacher / Teacher**

*October 2013 – October 2018*

- Managed teachers, scheduling, curriculum, materials, meetings, and teacher observations.
- Developed curriculum for English programs at Bangkok Technical of Business Administration College and Bangkok Suvanabhumi University.
- Taught general English courses, university courses, and private lessons at various levels.

**Nakijin Board of Education, JET Programme**, Okinawa, Japan  
**Assistant Language Teacher**

*August 2012 - August 2013*

- Taught full time at Nakijin Junior High School.
- Founded local community English courses for adults (Jana English Class).
- Taught volunteer summer English camps (elementary and high school).
- Teaching ability noted in local and prefectural newspapers.

**Horizon International School**, Mandalay, Myanmar  
**Grade 6 Teacher**

*March 2012 - May 2012*

- Developed summer curriculum; taught computer literacy and internet usage classes.

**Ministry of Education**, Krtsanisi, Georgia  
**K-12 English Teacher**

*September 2011 - December 2011*

- Taught twenty-five hours per week.
- Assisted with One Laptop Per Child (OLPT) program.
- Founded and led after-school English program for adults.

**Center for American Progress**, Washington D.C., USA  
**Executive Intern (for John Podesta)**

*January 2010 - March 2010*

## AWARDS AND HONORS

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Wall Street English Employee of the Year Award

2021

Dean's List, University of California, Davis

Multiple Quarters

Phi Kappa Phi Honors Society, University of California, Davis Chapter

Inducted 2011

## SKILLS

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**Programming & Software:** Python, R, GIS (ArcGIS, QGIS), LaTeX (Overleaf), Microsoft Autogen AI agents, Prompt Engineering

**AI/ML:** Neural Networks, Supervised Learning, Reinforcement Learning

**Technologies:** Retrieval-Augmented Generation (RAG), Git/GitHub ([github.com/yurigushiken](https://github.com/yurigushiken))

**Languages:** English (Native), Thai (Intermediate), Spanish (Beginner), Japanese (Beginner)

**Other:** Student Senator, Woodland Community College (2006-2007)

## REFERENCES

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### **Peter Gordon, Ph.D.**

Associate Professor of Neuroscience and Education

Director, Language and Cognitive Neuroscience Lab

Teachers College, Columbia University

*RA Supervisor (PI), Linguistics Course Professor*

[pgordon@tc.columbia.edu](mailto:pgordon@tc.columbia.edu)

212-678-8162

### **Ellen B. Meier, Ed.D.**

Professor of Practice

Executive Director, Center for Technology and School Change

Teachers College, Columbia University

*Academic Advisor, EdTech Specialist Program*

[ebm15@tc.columbia.edu](mailto:ebm15@tc.columbia.edu)

212-678-3829

### **Jean Tang, Ph.D.**

Lab Manager, Language and Cognitive Neuroscience Lab

Adjunct Assistant Professor

Teachers College, Columbia University

*LCN Lab Manager, EEG Project Lead*

[jt2615@tc.columbia.edu](mailto:jt2615@tc.columbia.edu)

### **Rachel Eunjoon Um, Ph.D.**

Adjunct Instructor

Division of Applied Undergraduate Studies

New York University

*Professor, Cognitive Science Course*

[aju202@nyu.edu](mailto:aju202@nyu.edu)

## OTHER CERTIFICATIONS

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Certified Honda Automotive Technician

2005–2006