Yu-Ming Chen

Fellow in Child and Adolescent Psychiatry, Taipei Veterans General Hospital, Taipei, Taiwan
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RESEARCH INTERESTS

My research interests lie at the intersection of psychiatry and computer science, focusing on developing interdisciplinary AI-driven tools to enhance mental health care. I aim to integrate both natural language processing and computer vision to assess and improve social interactions in individuals with Autism Spectrum Disorder, and translate clinical experiences into the design of human-centered technologies that assist social skills and psychotherapy.

EDUCATION

Kaohsiung Medical University, Kaohsiung, Taiwan | Aug 2008 — Jul 2015
Doctor of Medicine | Cumulative GPA: 3.99/4.00

National Taiwan University, Taipei, Taiwan | Aug 2017 — Jul 2024
Bachelor of Science and Engineering
Specialization: Combined Major in Mathematics and Computer Science | Cumulative GPA: 4.26/4.30

ClINICAL EXPERIENCE

Taipei Veterans General Hospital, Taipei, Taiwan
Fellow in Child and Adolescent Psychiatry | Aug 2024 — Present

- Comprehensive assessment and management of children and adolescents with neurodevelopmental disabilities, including Autism Spectrum Disorder, Attention Deficit Hyperactivity Disorder, and Learning Disorders
- Development of individualized treatment plans, including pharmacology, psychotherapy and social skill interventions
- Collaboration with multidisciplinary teams, including psychologists, occupational therapists, and social workers, to ensure holistic care
- Conducting family therapy sessions and providing psychoeducation to caregivers on social and emotional challenges
- Supervising and mentoring psychiatric residents in child and adolescent psychiatry practices

Psychiatry Resident | Aug 2020 — Jul 2024

- Conducted comprehensive psychiatric evaluations for patients across diverse age groups with various psychiatric conditions, including mood disorders, psychotic disorders, and substance use disorders
- Managed inpatient and outpatient psychiatric care, ensuring individualized treatment planning, including medication management and psychotherapy
- Participated in crisis intervention, including suicide risk assessment, management of acute psychosis, and emergency psychiatric care
- Collaborated with multidisciplinary teams to provide integrated care, involving social workers, psychologists, and nursing staff

Kaohsiung Medical University Hospital, Kaohsiung, Taiwan
Postgraduate Resident | Aug 2016 — Jul 2017
National Taiwan University Hospital, Taipei, Taiwan
Intern | Jun 2014 — May 2015

Publications

Conference Papers

- **Submitted**
  Xin-Yu Chen, **Yu-Ming Chen**, Chin-Po Chen, Bo-Hao Su, Susan Shur-Fen Gau and Chi-Chun Lee. *SocialRecNet: A Multimodal LLM-Based Framework for Assessing Social Reciprocity in Autism Spectrum Disorder. International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2025.*

RESEARCH PROJECTS

Multimodal Analysis of Social Reciprocity in Autism Spectrum Disorder | Apr 2024 – Sep 2024

- **Role:** Co-first author in a cross-disciplinary research project under the guidance of Professor Chi-Chun Lee at National Tsing Hua University.

- **Project Overview:** Developed a multimodal LLM tailored for conversations in the Autism Diagnostic Observation Schedule (ADOS) dataset to assess social reciprocity.
- **Key Contributions:**
  - Proposed and established the fundamental architecture of the model by combining insights from prosodic-acoustic entrainment with LLMs.
  - Addressed data limitations by redefining contextual segments as units of analysis, enhancing data augmentation while ensuring alignment with ADOS scoring principles.
  - Analyzed experimental results from both computational and clinical perspectives, refining the model structure to better mirror the dynamics of human interaction.

Course Projects

Application of Differential Matrices to Boundary Value Problems *Autumn 2019*

- **Project Overview:** Investigated the efficacy of solving differential equations with boundary values using various differential matrices, derived from finite difference and spectral methods, applied to both uniform and non-uniform grids.
- **Key Contributions:**
  - Analyzed the convergence properties of different matrices and their stability with respect to boundary conditions.
  - Developed MATLAB code to compare the accuracy and computational efficiency of methods using different grid configurations.
  - Conducted numerical experiments to demonstrate the impact of grid resolution on solution accuracy for specific boundary value problems.

AWARDS

Dean's Award, College of Science, National Taiwan University May 2024

Best Chief Resident Award, Department of Psychiatry, Taipei Veterans General Hospital Jul 2024

Best Intern Award, National Taiwan University Hospital May 2015

Dean's Award, College of Medicine, Kaohsiung Medical University Hospital May 2015