ALEC BODOLAY

✉ bodolayalec@gmail.com   ☎ +1 3106001073   🔗 www.linkedin.com/in/alecbodolay/

EDUCATION

- **University of Southern California - Los Angeles, CA**   August 2024 - May 2025
M.S.: Neuroimaging and Informatics - GPA 3.89

- **University of California Santa Barbara - Santa Barbara, CA**   January 2021 - September 2022
B.S.: Behavioral Neuroscience - GPA: 3.61

- **Santa Monica College - Los Angeles, CA**   August 2017 - June 2020
A.A.: Biological Science - GPA: 3.64

TECHNICAL SUMMARY

- ***Data Science & Analysis****:* Proficient in applying statistical tests and generating interpretable results from behavioral and biomedical datasets*, e.g.,* linear and logistic regression analyses in R and Python.

- ***Data Engineering****:* Experienced in processing and harmonizing large-scale datasets for ad-hoc and exploratory analysis*;* developed reproducible data pipelines for neuroimaging and psychiatric clinical research.

- ***Data Management:*** Managed randomized clinical trial and multi-site neuroimaging data on High-Performance Computer Cluster; Optimized data infrastructure, supporting efficient and collaborative research environments.

- ***Data Visualization****:* Built applications and dashboards for automated visualization, and monitoring; reducing manual processing time by >90%.

- ***Programming & Tools:*** R (3+ years; tidyverse, targets, Shiny), Python (2+ years; pandas, nibabel, scikit-learn), Unix Shell (3+ years; Bash), Git (3 years), MATLAB (1 year).

EXPERIENCE

- **Research Assistant - Children's Hospital Los Angeles, Los Angeles, CA**   June 2025 - Present
Ultra low-field Neuroimaging In The Young (UNITY)
  - Processing magnetic resonance images of infant brains (ages 0-18).
  - Managing data infrastructure and organization on High-Performance Computer Cluster.
  - Contributing to the development of deep learning–based tool for automated segmentation of infant brains.
  - Automating imaging preprocessing pipelines by developing and deploying custom containerized algorithms.

- **Resource Employee - USC's Neuroimaging and Informatics Institute, Los Angeles, CA**   June 2025 - Present
  - Independently built and configured a Linux server to support large-scale neuroimaging research.
  - Deploying an XNAT instance on Linux server to centralize MRI data storage and project management.

- **Programmer - Massachusetts General Hospital, Boston, MA**   October 2022 - July 2024
Varenicline Intervention for Vaping Abstinence (VIVA)
  - Designed data pipelines under Git version control with REDCap's API integration, cleaning incoming data and enhancing the validity and reproducibility of the randomized trial.
  - Processed and harmonized large-scale multi-format datasets for analysis and sharing with collaborators, support the development of more effective therapies for nicotine dependence among young adults.
  - Conducted statistical analyses (linear, logistic regression) in collaboration with Biostatisticians.
  - Managed multiple REDCap projects with strong data quality assurance oversight.

  School-Wide Screening for Substance Use and Risk Factors (SURF)
  - Engineered automated dashboards for multi-site data collection and data processing optimization (from 4 hours to 15 minutes), enabling rapid identification of substance use trends and behavioral risk factors.
  - Managed the study's data pipeline, REDCap project, and trained newly-hired programmers.

GRADUATE COURSES

- *Physics & Medical imaging*: Neuroimaging Data Acquisition with MRI (NIIN530); Fundamentals of Human Neuroimaging (NIIN 510); Experimental Design for Neuroimaging (NIIN 520);
- *Data science & machine learning*: Neuroimaging Data Processing Methods (NIIN 540); Computational Modeling in Neuroimaging (NIIN 550); Data Science in Neuroimaging (NIIN 580);
- *Neuroscience & research*: Neuroimaging and Systems Neuroscience (NIIN 500); Neuroimaging Genetics (NIIN 570); Current Topics in Neuroimaging Informatics (NIIN 597); Science Communications (NIIN 600).

PUBLICATIONS

[1] Costello, M., **Bodolay, A.**, Gray, C., Du, R., Potter, K., & Schuster, R. (2025). Emotional Reactivity is a Transdiagnostic Risk Factor for Substance Use Initiation in Middle and High School Students. *Drug and Alcohol Dependence*, 267, 111623

[2] Schuster, R., Cather, C., Pachas, G., Iroegbulem, V., Dufour, J. R., Casottana, K. D., Zhao, J., Potter, K., **Bodolay, A.**, Evins, A. E. (2025). Characteristics of Adolescents Presenting for a Pharmacotherapy Vaping Cessation Trial who Never Smoked Tobacco Regularly. *Drug and Alcohol Dependence*, 267, 111982

[3] Costello M. A., Pascale M. P., Potter, K., Knoll, S. J., **Bodolay, A.**, Kaur, J., Du, R., Greenspan, L., Gray, C. A., McIntyre, J., & Schuster, R. M. (2025). Understanding Adolescent Mental Health Symptom Progression in School-Based Settings: The Substance Use and Risk Factors (SURF) Survey. *School Psychology*.

[4] Pachas, G. N., Reeder, H. T., Evins, A. E., Casottana, K., Borrego, M. M., **Bodolay, A.**, Gray, C. A., Potter, K. W., Keuroghlian, A. S., & Schuster, R. M. (2025). Substance use, suicidal behaviors, and other mental health outcomes among youth with intersectional sexual and gender diverse identities. *Journal of the American Academy of Child & Adolescent Psychiatry Open*. In Press.

[5] Liu, J., Knoll, S. J., Pascale, M. P., Gray, C. A., **Bodolay, A.**, Potter, K. W., Gilman, J., Evins, A. E. , & Schuster, R. M. (2024). Intention to quit or reduce e-cigarettes, cannabis, and their co-use among a school-based sample of adolescents. *Addictive Behaviors,* 157, 108101.

[6] Gray, C. A., Iroegbulem, V., Deming, B., Butler, R., Howell, D., Pascale, M. P., **Bodolay, A.**, Potter, K., Turncliff, A., Lynch, S., Whittaker, J., Ward, J., Maximus, D., Pachas, G. N., & Schuster, R. M. (2023). Pragmatic Clinical Effectiveness Trial of a Novel Alternative to Punishment for School-Based Substance Use Infractions: Study Protocol for the iDECIDE Curriculum. *Frontiers in Public Health,* 11, 1203558

LANGUAGES

- *Fluent*: English and Portuguese (native).
- *Intermediate*: French.
- *Beginner*: Spanish.

AWARDS AND ACHIEVEMENTS

- *Peer mentor, Transfer Edge, 2021:* Mentored incoming transfer and international students part of the Transfer Edge program, providing support and resources for student success and well-being;
- *Academic Scholarships, 2020:* Recipient of academic scholarships including Associated Student Government (ASG) Leadership scholarship, Dr. Harry L. & May P. Bauer Memorial scholarship, and AS Scholarship for Student Success for undergraduate studies;
- *President Ambassador, 2019:* 1 of 13 students selected for the Ambassador program aimed to guide prospective and current students in their pursuit of higher education;
- *Executive Secretary, International Honor Society, 2019*: Acted as executive secretary for Phi Theta Kappa International Honor Society raising funds, and promoted academic excellence and student well-being;
- *Sustainability Workshop Leader, 2018:* 1 of 2 students selected as sustainability workshop leaders.