

## EDUCATION

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- **University of Southern California, Los Angeles, CA** August 2024 - May 2025  
M.S.: Neuroimaging and Informatics - GPA 3.86
- **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

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- **Programming Languages:** 3 years of experience in R and Unix shell (bash); 1 year of experience in Python and MATLAB; 6+ months of experience in VBA and Lua.
- **Statistical Computing:** Performed linear and logistic regression analyses in R and Python; Implemented supervised machine learning models in Python using scikit-learn.
- **Data Engineering:** Developed reproducible data pipelines in R with Git version control system, integrating RESTful APIs; Harmonized large-scale clinical datasets (CSV, JSON) using R (tidyverse, rjson) and Python (pandas, numpy).
- **Applications & Visualization:** Built R Shiny apps and dashboards for automated data processing, visualization, and monitoring; Designed annual epidemiological report using R Markdown and ggplot2.
- **Neuroimaging & Signal Processing:** Processing structural MRI data (DICOM/NIfTI) and developing segmentation methods in Python and MATLAB (using nibabel, scikit-learn, SPM, FSL).

## EXPERIENCE

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- **Graduate Research Assistant - Keck School of Medicine of USC, Los Angeles, CA** March 2025 - Present
  - *Image processing:* Processed magnetic resonance imaging data (DICOM/NIfTI).
  - *Image segmentation:* Developing novel method to identify and segment lacunar infarcts in the brain using Python and MATLAB.
- **Programmer - Massachusetts General Hospital, Boston, MA** October 2022 - July 2024  
*Randomized Clinical Trial of Varenicline for Smoking Cessation*
  - *Data pipelines:* Designed and implemented reproducible data pipelines under Git using R Targets package, cleaning incoming data while overseeing the integrity of clinical healthcare data.
  - *RESTful API:* Built automated workflows in R using REDCap's API for routine data exports, enabling secure and timely integration of collected data into processing pipelines.
  - *Statistical analysis:* Collaborated with Biostatisticians on implementing the statistical analysis plan to analyze data using Linear and Logistic Regression models in R.
  - *Dataset harmonization:* Harmonized large-scale datasets of multiple formats (JSON, CSV) using R tidyverse and rjson packages, facilitating both exploratory and primary analyses.
  - *Quality Assurance:* Managed multiple REDCap's projects, and advised study staff on best practices for data entry and quality assurance.  
*School-Wide Screening for Substance Use and Risk Factors (SURF)*
  - *R Shiny apps:* Developed R Shiny applications to automate data visualization, processing, and monitoring, reducing manual processing from 4 hours to 15 minutes.
  - *Report design and automation:* Designed an annual epidemiological report, tailored individually for over 60 regional schools, and automatically generated through R Markdown; Code capable of sustaining an increasing number of enrolled schools (over 200 for the following year).
  - *Data visualization:* Prepared figures, tables, and ad hoc reports for presentations, written publications, and grant submissions.

## GRADUATE COURSES

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- *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

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- [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

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

## AWARDS AND ACHIEVEMENTS

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- *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.