

# Summer Internship Overview

**UC San Diego**

**JACOBS SCHOOL OF ENGINEERING**  
Electrical and Computer Engineering



**Pamela Cosman**

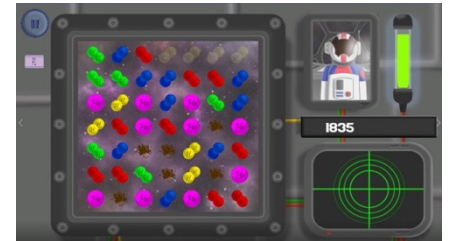
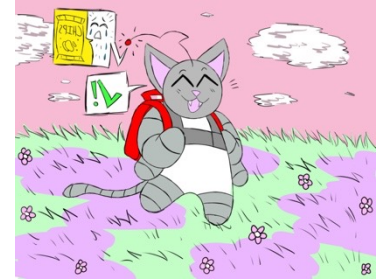
**Professor, Dept. of Electrical and Computer Engineering, UC San Diego**

**Director, Neurodiversity in Tech Internship Program at UC San Diego**








# Summer Internship Basics (2023)

- 9 weeks: mid-June to mid-August
- Half-time (8am-12 or 1pm-5) + weekly professional development sessions (12-1)
- Interns paid \$3000
- Interns are young adults (18-25+), nearly all autistic, mostly in college or community college (some post-college or unemployed)
- Application process involves web-based application, transcript, Zoom interview.
- Team-based, usually 5 interns per team
- Creation of educational video games

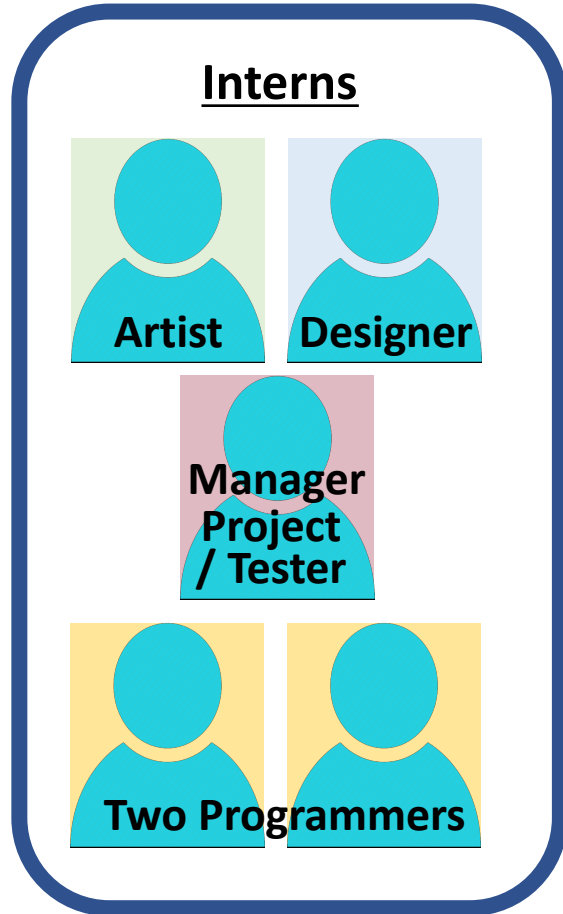


# Internship 2018 – 2024

Year	Funding	UC San Diego	Northeastern University
2018	San Diego Foundation & Legler Benbough Foundation 	In person, 25 interns	
2019	No funding	In-person, 4 interns	
2020	National Science Foundation  	Remote, 25 interns	
2021	National Science Foundation	Remote, 25 interns	
2022	National Science Foundation + State of California	In-person, 16 interns 	2 In-person teams, 1 remote team, 15 interns 
2023	National Science Foundation + State of California	Hybrid (1 remote day), 15 interns	Hybrid (1 remote day), 15 interns

2024: Continuing at both sites, continuing to evolve (e.g., no remote day)

# Intern Roles



- **Artists:**
  - Learn software tools and methods to create game art
  - Objects, immersive background, user interface elements such as buttons
  - Adobe Photoshop / Procreate / Krita
  - 3D software such as Autodesk Maya, Meshlab
- **Designers:**
  - Design the game experience for players
  - Create mockups of game, communicate concepts with team & client
  - Learn software tools such as Atlassian's Confluence Software, Figma
- **Project Managers (PM):**
  - Lead daily stand-ups, organize tasks, ensure progress
  - Use project tracking software such as Jira or Asana
  - PM is usually also lead QA tester (used to be 2 separate roles)
- **Programmers (used to be 1, now 2):**
  - Script object behaviors, interactions, and user interface
  - Integrate everyone else's work into the project (art & music)
  - Learn to navigate Unity game engine (uses C# and Visual Studio Code Editor)
  - Manage version control in Github, practice peer programming

# Other Roles



- **Coaches:**
  - Young adults, experience with neurodivergence, background in game art or coding
  - In the room with the interns daily
  - Provide coaching on workplace communications, technical work, etiquette, etc.
- **Clients:**
  - Specify the game concept & goals
  - Meet weekly with the team
  - Can be external to university or internal
- **Evaluators:**
  - From UCSD Center for Research & Evaluation
  - Conduct pre- and post-surveys of interns and clients
- **Mentors**
  - Industry professionals from Ubisoft or indie game developers
  - Some are attached to specific team, provide technical advice & feedback on game
  - Some give a session on game industry, Q&A, feedback on intern resumes
- **Directors & Staff**
  - Direct the program, including personnel, research projects & program evolution
  - Conduct weekly Lunch 'n' Learn sessions

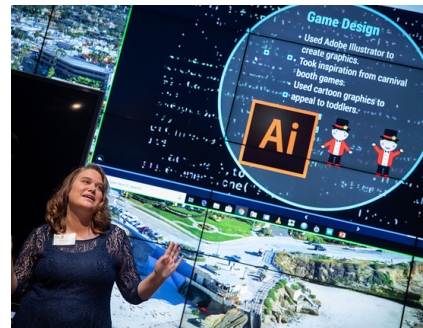
# Internship has many elements

- **Weekly Lunch 'n' Learn sessions for professional development:**
  - Importance of first impressions
  - Building a resume
  - Building a LinkedIn profile
  - Writing a cover letter
  - Public speaking
  - Time management
- **Behavioral coaching:**
  - Communication norms (tone and level of detail, text / email / Discord modalities, etc.)
  - How to provide feedback to peers
  - Workplace etiquette (punctuality, cellphone use, use of communal fridge, suitable clothing)
  - One-on-one help with developing CVs and LinkedIn profiles
- **Workplace tools**
  - Jira (project management)
  - Discord or Slack (communications platform)
  - Git (content repository)
  - Unity or Unreal (development environment)





# Summer ends with celebratory showcase event





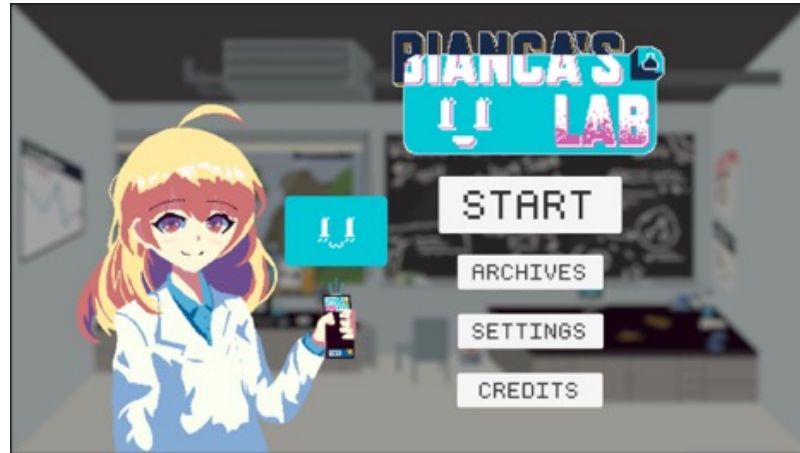
# Game prototypes posted on itch.io

- Enables interns to showcase their work to future employers



**ExpirAItion Date:** Time traveling mystery game powered by ChatGPT

2023 UC San Diego games



Bianca's Lab: Explore bioengineering--choose the right bone for a hip replacement (but wash the table first!)



Hue Hunt: Learn concepts of light physics (reflection, refraction) as you restore color to the world





# Games are educational and/or research-based



**Rhythm Power!** Dance workout!  
Rack up points and get a fun workout.

**Sugar Slay:** Health app + pet simulator guides players towards essential diabetes management habits, for those recently diagnosed with Type 1 diabetes



**Ice Cream Peers:** Accurately fulfill customer orders in this collaborative multiplayer ice cream-making extravaganza



**2023 Northeastern U. games**

# Research connected to the internship

- **Development of tech tools**
  - Analysis of gaze behavior and body orientation during conversation
  - Virtual reality mock job interview
- **Analysis of Discord communications**
  - Sentiment analysis
  - Frequency analysis
  - Remote vs. In-person days
- **Ethics and policy:**
  - Personality tests for hiring screening
- **Education:**
  - Study of family, community, coaching support
- **Research on Internship Model**
  - Quantitative and qualitative program evaluation
  - Modification of internship over time

