

# Taj Gillin

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## EDUCATION

**Brown University | Providence, RI | May 2026**  
*Physics, Biological Track (ScB); Applied Math-Computer Science (ScB)*  
*Coursework:* Deep Learning; Prescriptive Analytics; Parallel Computing; Probability, Optimizations, and Stochastic Calculus

- Defenseman for club ice hockey, Brown Design Workshop monitor, aspiring salsa dancer

**GPA: 4.0**  
**ACT: 36**

## PROFESSIONAL EXPERIENCE

**Five Rings**  
*Incoming Quantitative Trading Intern*  
**Brown University Computer Science**  
*Teaching Assistant*

- Developed curriculum and assignments for a new course, Foundations in AI (CSCI0410/1411), alongside professors and TAs
- Taught and helped undergraduate and graduate students build a strong conceptual understanding of difficult topics in Foundations of AI and Deep Learning (1470/2470)
- Gained fluency and a strong understanding of taught content

**Jun 2025 - Aug 2025**  
*New York, NY*  
**Jan 2024 - Dec 2024**  
*Providence, RI*

**Architect Therapeutics**  
*Software Engineer*

- Drove computational research to accelerate chemical compound discovery and optimization for emerging pharmaceutical innovations
- Developed sophisticated computational algorithms for hit discovery and lead optimization, leveraging computer-aided drug design (CADD) and advanced statistical methodologies
- Designed and implemented a web-based computational management platform that streamlines job scheduling, computation tracking, and results visualization, enhancing team productivity and research workflow efficiency

**Jun 2024 - Present**  
*San Diego, CA; Remote*

**Singh Lab Research**  
*Undergraduate Researcher*

- Explored novel strategies for identifying drug-drug interactions using state-of-the-art large language model approaches
- Conducted systematic experiments with machine learning techniques, including fine-tuning, retrieval-augmented generation (RAG), knowledge graphs, and graph network analysis
- Developed robust data extraction and sanitization protocols, utilizing techniques such as web scraping with Puppeteer to aggregate and process complex research datasets

**May 2024 - November 2024**  
*Providence, RI*

**Artificial Teaching Assistant (ATA)**  
*Founder*

- Conceived and developed a course-specific large language model assistant designed to provide nuanced, conceptual student guidance
- Successfully implemented the AI teaching tool across three Brown University courses, collaborating closely with professors in educational research and human-computer interaction
- Recognized with the Best Use of AI in Education award and Hazeltine Grant for innovative educational technology development

**Jan 2024 - Present**  
*Providence, RI*

**Yeggs**  
*Founder*

- Founded and scaled an international digital content production company specializing in Minecraft Marketplace and Realms content
- Partnered with Microsoft, achieving six-figure net profitability and expanding to a team of over 50 employees
- Orchestrated comprehensive project management, directly leading multiple teams and developing extensive collaborative software development experience

**Aug 2019 - Dec 2022**  
*International*

## PROGRAMMING | [taj-gillin.github.io](https://taj-gillin.github.io)

**Knowledge**

- Languages:** Python, JS/TS, C++ (Advanced), C, Java, Go (Intermediate), Pyret, Racket (Basic)
- Frameworks:** Web: React, Next, FastAPI, Django | ML: PyTorch, TensorFlow (Advanced), Jax (Basic)
- DevOps:** Docker, Unix, Shell Scripting
- Databases:** MongoDB, Redis, SQL (MySQL, Postgres)
- Fields:** Deep Learning, Machine Learning (Advanced), Reinforcement Learning, Parallel Computing (Intermediate)

**Projects**

- Internal Website for Architect: Full stack website for data management and task distribution on a computing cluster. Used React, TS (frontend), MongoDB, FastAPI Celery (backend and task deployment), Docker, shell (VM management)
- LIGAND: Generative adversarial network for gRNA design (CRISPR), designed and tested networks with TensorFlow
- [Illuminate](#): Generate animated education videos from any text input. Winner of Hack@Brown Best Use of Gen AI. Used CreateReactApp + FastAPI, LangChain, Manim, AWS

## OTHER

**Medicine:** Nationally Certified EMT-B; OSHA, HIPAA, BLS, ACLS certified  
**Interests:** guitar, reading, photography, puzzles, Legos, ice hockey, lacrosse, snow skiing