

Titania Emmons

Software Engineer with Experience in Mathematics, Instruction, and Communication

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Experiences



Browser Othello AI: [Live](#) - [Github](#)

- Java-implemented neural nets trained via genetic algorithms for state valuation
- Front-end Javascript implementation uses the trained coefficients
- Bitboard computation for extremely fast, low-resource processing

Pokemon Showdown Interface: [Before and After](#) - [Github](#)

- Paid to remodel interface with the imposition of no DOM modification
- Used pseudo-elements and inventive hacks to re-arrange/replace components for drastic manipulation
- Created art assets and interactive control element animations for improved user experience

Bridge:

- National title winner
- Paid by US Bridge Federation to represent them internationally in tournament

Skills



Java, Python, Javascript, CSS3, HTML5, React, Machine Learning, Discrete Math, Game Theory
[Triplebyte Certified](#) Generalist Software Engineer

Employment History



Cafe Lalo Bartender: April 2018 - May 2019

- Trained front of house staff members and organized team through busy services
- Handled customer purchases, register accounting, and some business banking transactions

Fairfax County Public High School Teacher/Substitute: September 2015 - June 2017

- Taught math courses from Algebra 1 through Differential Equations, AP Physics, and AP Biology
- Collaborated to develop curriculum and constructed lesson plans for my own sections
- Replaced Thomas Jefferson High School precalculus teacher in January 2016 for remainder of year

BBN Technologies and Office of Naval Research Intern: June 2007 - September 2010

- Contributed code for distributed network, high-precision time delay estimators
- Designed and coded an unmanned autonomous reconnaissance plane ground-control system

Education



Caltech: September 2009 - June 2014 with coursework in AI, information theory, differential equations, decidability and tractability, statistics, number theory, abstract algebra, signal processing, physics

Thomas Jefferson High School for Science and Technology: September 2005 - June 2009