Vishnu Pydah

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EDUCATION

Computer Science and Math Major
Vanderbilt University, Sophomore Class of 2020
Lexington High School, Honor Roll (2012-2016)

JOB/RESEARCH EXPERIENCE

- ***UT Austin Summer Research Methods (2014):*** Performed an experiment involving several strains of pigment-producing bacteria that exhibited antifungal properties.
- ***UT Austin Summer Research Internship (2015):*** Worked in a functional genomics lab focusing primarily on stress-induced proteins in yeast. Tested the YLLOSAC *S. cerevisiae* gene's effect on *E. coli* growth using plasmid preps, electroporations, BP transformations, and solution preparations for general stock.
- ***Vanderbilt IT Department (2016):*** Work to troubleshoot and fix computer-related issues, such as malware infections, networking problems, hardware failures, and BSODs, through phone calls and walk-ins

PROJECTS & CLASSES (Java/C++/Javascript/etc..) *Github:* **https://github.com/vpamrit**

- Planet Sim: Worked extensively with Processing and UI development to create a climate simulator that integrates earth science and physics
- Created simple encryption and decryption program using changing keys, involving the list interface, queues, priority queues, linked lists and recursion
- ***MIT Battlecode****:* Developed game theory ideas and algorithms, coding simple "AIs" to play games such as tic-tac-toe (via Monte Carlo simulations), and attended MIT BattleCode, an RTS game competition
- ***DNA Sim:*** Created a DNA Strand Class that simulates nucleic sequences and has applications to medicine and research
- ***"Planet Vortex"/"Entity":*** original game ideas involving complex-body physics, polar coordinates, barrier/bounce interactions via vector projections, current project involving pathing AI, touch-based interface, and physics on Android Platform
- ***Web Development:*** Created a personal website, and learning back-end programming through node.js and an online course at Hong Kong University
- **Classes:** Data Structures, Multivariable Calculus, Discrete Structures, Computer Organization, Linear Algebra, Digital Logic, Computers and Ethics, Scientific Computing,

EXTRACURRICULARS/ACHIEVEMENTS:

- ***Science Competitions:*** In 2016, team ranked 8th in the U.S National Ocean Sciences Bowl, and individually ranked 2nd in the MA State Brain Bee competition.
- ***Animation Club:*** Co-founder and organizer of club projects and meetings. Animation ideation and design.
- ***USABO Competition Semifinalist***
- ***ACM-ICPC Algorithm Contest (2016):*** Placed 3rd in Vanderbilt, 4th in Tennessee, 28th in Central U.S Region

SAMPLE COMMUNITY SERVICE:

- ***Chess Tutoring (100 hours)***: Helped teach children from disadvantaged backgrounds at the Boylston Chess center.
- ***School Tutoring (40 hours):*** Spend time teaching high-school students math and science.
- ***InDeed Campaign (30 hours):*** Participated in outreach related to a campaign for environmental preservation organized by the non-profit Embracing the World.