

Melodies Sim

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ABOUT ME

A Year 3 Computer Science and Math student, and an aspiring full stack developer passionate about turning novel ideas into reality.

EDUCATION

NATIONAL UNIVERSITY OF SINGAPORE

Double Degree in Computer Science and Mathematics
Aug 2017 - Present

RAFFLES INSTITUTION

Jan 2015 - Dec 2017
A Levels: AAAA/A
H2: Math, Physics, Chemistry, Economics | H1: General Paper

CONTACT

Github:// <https://github.com/Happytreat>
LinkedIn:// <http://gg.gg/LinkedInMelodies>

COURSEWORK

UNDERGRADUATE

Software Product Engineering for Digital Markets
Design and Analysis of Algorithms
Machine Learning and Artificial Intelligence
(Enrolled in Aug 2019 - Nov 2019)

SKILLS

PROGRAMMING

Languages:

Javascript • Java • Python
CSS/HTML • LaTeX • C++

Familiar:

NodeJS • React-Redux • ReQL/SQL
Git • AWS/Serverless Framework

AWARDS

- 2019 AngelHack AWS Challenge Winner
- 2019 National Blockchain Challenge Second Place
- 2017 NUS Global Merit Scholarship
- 2015 Lee Kuan Yew Math and Science Award
- 2014 Singapore Mathematics Olympiad Gold

EXPERIENCE

HODLNAUT | FULL-STACK SOFTWARE ENGINEER INTERN

SEA First Crypto-Bank | May 2019 - Aug 2019

- 1 out of 3 developers in the team: Developed APIs and UI features for Hodlnaut's beta launch using React, NodeJS, ExpressJS stack. AUM has increased by 300% since joining the team.
- Independently implemented the Know Your Customer (KYC) System.
- Implemented **Hodlnaut Landing Page**. Initiated UX/UI improvements to increase user retention on **Hodlnaut App**.

NATIONAL UNIVERSITY OF SINGAPORE | TEACHING ASSISTANT

CS2103 Software Engineering Module | Jan 2019 - May 2019

- Responsible for teaching 10 students software engineering concepts such as design patterns and tools like UML diagrams.
- In charge of giving feedbacks/grading on documentations and final projects

AGENCY OF SCIENCE, TECHNOLOGY AND RESEARCH

BLOCKCHAIN TECHNOLOGY RESEARCH INTERN

May 2018 - Aug 2018 | Singapore

- Researched about ZCash and how it achieved anonymity using shielded transactions and zero-knowledge proofs/zk-SNARKs.

PROJECTS

UPLAN | VISUAL UNIVERSITY MODULE PLANNER WEBAPP

In Progress | <https://github.com/Happytreat/UPlan2.0>

- UPlan aims to allow students to make organised and informed college decisions.
- Features drag and drop, tagging and auto-tabulation of modules based on college requirements. Student can attach high-level goals to each semester.
- UI state management is implemented using React-Redux. Backend functions are deployed using the Serverless Framework using AWS S3, DynamoDB and Lambda. User management is performed using AWS Cognito.

PATRONAGE COLLECTIBLES

Decentralised Crowdfunding Platform With Harberger Crypto-Collectibles
<https://devpost.com/software/patronage-collectibles>

<https://github.com/Happytreat/PatronageCollectibles>

- Won the National Blockchain Challenge Vertical Prize 2019.
- Aims to solve the problem of traditional crowdfunding: lack of personal touch. Instead of a cold Thank You message, patrons buy unique Crypto-Collectibles to support creators. The Harberger tax property of collectibles also ensures a regular stream of pledges for creators.
- Smart contracts are implemented using Truffle suite and integrated with the UI using Drizzle-React.

EXTRACURRICULAR

CHARITEACH 2019 | MAIN TRAINER

- Responsible for teaching the underprivileged students Scratch and programming logic.

ETHELONTER XV (E15) FRESHMAN CAMP 2018 | PROGRAM CELL HEAD

- Responsible for planning and executing a main section of the camp.
- Choreographed and taught 80 freshmen the camp dance.