

# Advay Pal

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## EDUCATION

### STANFORD UNIVERSITY

MS IN COMPUTER SCIENCE  
Expected Apr 2021 | Palo Alto  
Cum. GPA 4.15/4.0

### NATIONAL UNIVERSITY OF SINGAPORE

BComp in Computer Science  
Grad. May 2019 | Singapore  
Cum. GPA: 4.7/5.0  
University Scholars Programme

## LINKS

Github:// [advaypal](#)  
LinkedIn:// [advay-pal](#)  
Facebook:// [advay.pal](#)  
Twitter:// [advaypal](#)

## TEACHING

### Deep Learning:

Winter '20, Fall '19

### Data Structures and Algorithms:

Spring '19, Fall '18, Fall '17,  
Spring '17

### Programming Methodology:

Fall '16

## COURSEWORK

Deep Multi Task and Meta Learning  
Programming Languages  
AI Planning and Decision Making  
Machine Learning  
Distributed Systems  
Combinatorial and Graph Algorithms  
Operating Systems  
Information Retrieval  
Computer Networks  
Principles of Economics  
Philosophy

## SKILLS

### Experienced

• Python • C • Java

### Familiar

• C++ • Rust • OCaml • Scala  
• Swift • JavaScript • Ruby

## ACTIVITIES

NUS Hackers: **President** (17/18)  
Inter College Games: **Soccer**  
NUS USP **Peer Mentor**

## EXPERIENCE

### ZILLIQA | SOFTWARE ENGINEERING INTERN

June 2019 - Aug 2019 | Singapore

- Worked at Zilliqa, a **startup** that applies **sharding** to build **scalable** Blockchains.
- Reduced the **inter-process communication** overheads between the Smart Contract Interpreter and the Blockchain from **linear** to **constant**.
- Built a **dApp** on Zilliqa's platform to promote a marketing campaign.

### APPLE | SOFTWARE ENGINEERING INTERN

May 2018 - Jul 2018 | San Francisco Bay Area

- Worked on **Machine Learning Infrastructure** for Siri.
- Designed, architected, and implemented a **search indexing** tool to efficiently query Siri's **ontology**.
- Was **selected** to present project to the **head** of Siri (Apple **VP**).

### TWITTER | SOFTWARE ENGINEERING INTERN

Feb 2018 - Apr 2018 | San Francisco Bay Area

- Worked on **Applied Machine Learning** for the Twitter **home timeline**.
- Used **Deep Neural Networks** to predict user engagement on videos. Performed data analysis, feature engineering, and model training.
- Launched **experiments** to evaluate the effects of models on **production traffic**.

### TWITTER | SOFTWARE ENGINEERING INTERN

May 2017 - Aug 2017 | San Francisco Bay Area

- Worked on **Twitter Lite**, a **Progressive Web App** with over **6 million** daily users.
- Built Twitter Lite's **live video** experience, and integrated the Chrome **credentials management** API into the app.

### XFERS | SOFTWARE ENGINEERING INTERN

May 2016 - Jul 2016 | Singapore

- Worked as a **full stack** engineer at Xfers, a **YCombinator** Summer 2015 **startup**.
- Built a **system** to streamline Xfers' KYC onboarding process, and an internal **analytics dashboard**.

## RESEARCH

### FEDERATED LEARNING | NATIONAL UNIVERSITY OF SINGAPORE

Aug 2018 - Apr 2019 | Final Year Dissertation

- Worked on devising robust algorithms to deal with **adversarial client nodes** in Federated Learning. Used **TensorFlow** to implement all approaches.

### AUTOMATIC HYPERPARAMETER TUNING | NATIONAL UNIVERSITY OF SINGAPORE

Jan 2017 - Dec 2017 | Undergraduate Research Opportunities Program

- Explored using and combining **Bayesian Optimisation** and **gradient based methods** for hyperparameter tuning. Used **PyTorch** to implement all approaches.

## ACHIEVEMENTS

2019 **Gold Medal** for **outstanding all-round achievement** in graduating CS class  
2019 **Silver Medal**, NUS Inter College Games, Soccer  
2018 **Excellence in Teaching** award for work as an Undergraduate Teaching Assistant  
2017 PwC Prize for the **Most Outstanding Second Year** CS Student