

# Koa Zhao Yuan

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## EDUCATION

### Yale-NUS College

Aug 2019 – Present

*Bachelor of Science in Mathematical, Computational and Statistical Sciences*

*GPA: 4.80 / 5*

- Recipient of the full-ride, bond-free Yale-NUS Global Leader Scholarship only awarded to the best applicants
- Relevant Coursework: Introductory Data Structures and Algorithms, Modelling and Optimization, Functional Programming and Proving, Real Analysis, Modern Algebra, Software Engineering

## TECHNICAL SKILLS

**Languages:** (*Proficient*): Python, TypeScript, Kotlin, Java (*Familiar*): C++, R, OCaml

**Libraries:** Leaflet.js, Blueprint.js, Tensorflow, OpenCV2

**Frameworks:** React, Next.js, Spring Boot, Docker, Cypress.js

## EXPERIENCE

### Software Engineer Intern

Aug 2021 – Present

*JobKred*

*Singapore*

- Currently implementing automated end-to-end testing using Cypress.js, reducing reliance on manual testing
- Ensured best practices in automated testing like regulating database state and session state

### Full-Stack Engineer Intern

May 2021 – July 2021

*Datature*

*Singapore*

- Developed various front-end features to enhance image annotation experience, increasing user retention
- Implemented UI/UX features and APIs on Portal, an open-source app that analyzes CV Model performance
- Rigorously tested code and wrote detailed user documentation for future employees/interns
- Technologies used: React Typescript, Leaflet.js, Blueprint.js, Next.js

### Machine Learning (OCR) Intern

Dec 2020 – Jan 2021

*SmartJen*

*Singapore*

- Implemented algorithm that identifies individual characters within a mathematical expression using OpenCV2
- Trained Convolutional Neural Network to recognize mathematical characters using Tensorflow and Keras
- Combined both of these in an proof-of-concept OCR engine using Flask to auto-grade math problems

## PROJECT

### Personal Website

Mar 2021

<https://www.kzhaoyuan.com/>

- Built and hosted a personal website using React.js, Material-UI and Amazon Web Services(AWS)
- Included utilities for Search Engine Optimization on website to maximize visibility

## EXTRACURRICULARS

### Yale-NUS Hacks

Aug 2021 – Present

*Vice-President (Workshops)*

- Organized a semester-long technical interview workshop to help students who aiming to work in technical roles
- Reviewed the course content and execution of all other workshops such as front-end web development

### Peer Tutor

Jan 2021 – May 2021

*YSC1212 Introduction to Computer Science*

- Hosted one-to-one and group sessions explaining basic computer science concepts like recursion and unit-testing
- Effectively explained concepts in a manner are accessible to non computer science majors