**ZHIXIANG TEOH**

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EDUCATION

**University of Michigan**, Ann Arbor, MI, 2021 – 2023

* B.S. Computer Science, ArborHacks, Google DSC Design & Engineering, GitHub Campus Expert

**University of Pittsburgh**, Pittsburgh, PA, 2019 – 2020

* Computer Science Club Mentor, Math Club Communications Director, [Second Place Big Idea Blitz 2020](https://drive.google.com/drive/folders/1dIgGMIHbo-wdgUm_f1gvAPu1lngcHQTN?usp=sharing)

SKILLS

Programming Languages: Java, C++, JavaScript, Python, OCaml, Haskell

Technologies/Frameworks: JUnit, Enzyme, React (Redux, Context), Three.js, Node.js, MongoDB, SQL, CI/CD

MEDIA

[Featured on Facebook’s developers blog for work on WebXR layers](https://developers.facebook.com/blog/post/2021/04/06/webxr-contributor-story-zhixiang-teoh/)

EXPERIENCE

**Open Source Fellow – Facebook/WebXR**, Major League Hacking, Remote, Jan 2021 - Apr 2021

* Built [immersive web video experiences](https://github.com/und3fined-v01d/webxr-layers/tree/docs) using [Three.js](https://threejs.org/) 3D rendering library and the new [Media Layers API](https://immersive-web.github.io/layers/#videolayer), supervised by [Rik Cabanier](https://github.com/cabanier/WebXRLayers-samples) at Facebook
* Extended samples to support different types of media, including 2D, 180/360-degree mono and stereo
* Won hackathons for open-source projects SlateVim and Retrospective-Tracker (see projects)

**Software Engineering Project**, National University of Singapore, Singapore, Aug 2020 - Dec 2020

* Applied object-oriented paradigm, Java 8 Streams, and unit and integration testing in a team CLI project
* Wrote [3500/6000 lines of code](https://ay2021s1-cs2113-t14-2.github.io/tp/team/zhixiangteoh.html), including main Game Mode, and 40% of user and developer docs
* Managed issues and releases, and [authored over 30 peer-reviewed PRs](https://github.com/AY2021S1-CS2113-T14-2/tp/pulls?q=is%3Apr+is%3Aclosed+author%3Azhixiangteoh+) in two months

**Teaching Assistant and Peer Tutor**, University of Pittsburgh, Pittsburgh PA, Jan 2020 - Dec 2020

* Undergraduate Teaching Assistant in Intermediate Java and Data Structures & Algorithms
* [Designed material](https://drive.google.com/drive/u/0/folders/1rg_ei3SXWZuU_enc-AiNw8wm7HNDQs_7) for weekly labs, and hosted individual office hours; 20h/week
* Highest [OMETS teaching survey](https://drive.google.com/file/d/1F8f2qScKxlD3Ix9FSofnghwNrbah4Wal/view?usp=sharing) response rate, 70% reported “enhanced understanding of class material”
* Student tutor in the Math and CS Resource Centers, in courses up to Linear Algebra and Algorithms

PROJECTS

[**Retrospective Tracker**](https://github.com/zhixiangteoh/retrospective-tracker/releases/tag/0.1), MLH Fellowship Halfway Hackathon, Mar 2021

* Browser extension to track weekly categorized notes; [winner out of 11 projects (44 participants)](https://devpost.com/software/retrospective-tracker)
* Drag-and-drop UI and auto-save using React Context to manage application state
* Formed team and authored [8 PRs](https://github.com/zhixiangteoh/retrospective-tracker/pulls?q=is%3Apr+author%3Azhixiangteoh+is%3Aclosed) and tracked all 13 progress and feature issues

[**SlateVim**](https://dev.d3p5pyu6h7q77o.amplifyapp.com/), MLH Fellowship Orientation Hackathon, Feb 2021

* Online collaborative Vim editor built with [Slate.js](https://www.slatejs.org/examples/richtext); [winner out of 31 projects (91 participants)](https://devpost.com/software/slatevim)
* [AWS Amplify serverless GraphQL API](https://docs.amplify.aws/lib/graphqlapi/getting-started/q/platform/js) to handle mutations and subscriptions for live collaboration

[**Course Review**](https://co-re.netlify.app/), Personal, Dec 2020

* Interactive course review web platform built on MERN stack, React frontend and RESTful backend API
* Fully functional login system built from scratch, and integrated with [Algolia’s InstantSearch API](https://www.algolia.com/doc/api-reference/widgets/instantsearch/react/)

[**Monads in Java**](https://github.com/zhixiangteoh/java-monads-report), Programming Languages Course, Oct 2020

* 10-page summary research report explaining and implementing monads in Java
* Wrote body sections, code snippets for [Maybe](https://github.com/zhixiangteoh/java-monads-report/blob/main/Maybe.java) and [Either](https://github.com/zhixiangteoh/java-monads-report/blob/main/Either.java) classes, [tests](https://github.com/zhixiangteoh/java-monads-report/blob/main/OptionalTestAssociativity.java) for conformity with monad laws

[**Machine Learning Methods in R**](https://github.com/zhixiangteoh/Machine-Learning-Methods-in-R), Machine Learning Course, Oct 2020

* Compared various machine learning methods, from simple linear regression to support vector machines
* Analyzed a 2000-samples raw materials dataset with twelve continuous inputs and two discrete inputs