

LUCAS SAECHAO

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EDUCATION

California State University, Sacramento

August 2016 - May 2021

Bachelors of Science in Computer Science

- Concentration in Game Engineering
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RELEVANT COURSEWORK

- Advanced Computer Graphics (OpenGL, AR, VR)
 - Cloud and Mobile Computing Pragmatics (AWS, .NET)
 - Database Management Systems (MySQL, Postgres)
 - Computer Game Architecture and Implementation
 - Intelligent Systems (Jupyter, ML, TensorFlow, Keras)
 - 3D Computer Modeling (Maya3D, Blender)
 - Data Structures and Algorithm Analysis
 - Software Engineering (Agile/Scrum SDLC, Jira)
 - Computer Architecture and Organization
 - Computer Networks and Internet (REST API)
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TECHNICAL SKILLS SUMMARY

Languages: Java (5 years), C++, C, Swift, PHP 7.3, JavaScript, x86 Assembly, SQL, Verilog, HTML, CSS, GraphQL

Database Management: MySQL, PostgreSQL, MongoDB

Tools: Github, Docker, Jira, Trello, Eclipse, Atom, PHP Storm, Xdebug, VS Code, Xcode, Apache Server, Jupyter Notebook

Other Technologies and Frameworks: OpenGL 4.3, Drupal, Vue.js, Google Cloud Platform, Microsoft Azure, AWS, .NET, REST API, Adobe Photoshop, Autodesk Maya3D, Blender, Anaconda, TensorFlow, Keras, NumPy, SciPy, Pandas

WORK EXPERIENCE

Junior Drupal 8 Web Developer

May 2020 - October 2020

Divic LLC - Sacramento, CA

- Developed and implemented fast and responsive website functionality for various teams and contracts, contributing and answering tickets on Jira and Trello
 - Implemented website functionality such as dynamic webform element updating, multiple windows targeting, form validation and variable size product promo cards taking advantage of Drupal 8, using Javascript/JQuery, and the PHP Symfony framework.
 - Developed and maintained scalable PHP code, taking advantage of RESTful API for content filtering, user request processing, querying, login and views integration
 - Implemented a webform migrator tool that would automate the migration of webform content and database submissions from Drupal 7 to Drupal 8 websites
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PROJECTS

Senior Capstone Project — Virtual Reality Driving Simulator (<https://pastachefs.github.io/trafficsim>) **September 2020 - May 2021**

- As de-facto project lead, spearhead an 8-person team in the development of a virtual reality simulator designed to model driver behavior, as part of a research project for the university Civil Engineering department.
- The application is a virtual reality app built in Unreal 4.23, with many modules programmed in C++, for use with an Oculus Rift with a LeapMotion IR finger tracking controller. The application supports level creation, driving simulation, NPC driver behavior, collision and interaction.
- Key product functionality will include: scenario builder, pre-defined roads, user driving information logging (gas pedal position, acceleration, brake time, steering input), real-time traffic simulator, and "autonomous" driving simulation mode.

Mobile Learning Application Using AWS EC2 (<https://github.com/saechaol/learning-app>)

September 2020 - December 2020

- Implemented an Android app that interfaces with a .NET web service developed with C++ with an available REST API endpoint, hosted on a T2 micro EC2 instance, with an RDS database backend. The frontend directly interacts with the web service using the implemented API controllers.
- The application allows for user registration for three distinct roles (admins, instructors, students), student enrollment, task assignment, scheduling and course viewing through the RESTful web API, as well as supports transaction processing, SSL encryption, and AWS load balancing.

Postcards — Full Stack Vue JS and GraphQL (<https://github.com/saechaol/fullstack-vue-graphql-web-app>)

February 2021

- Working on building a responsive full-stack web application named "Postcards" that supports secure user signup, login, authentication, photo posting, tagging, liking and commenting, using Vue.js framework on the frontend and MongoDB Atlas on the backend. Data is fetched and mutated through GraphQL API endpoint that interfaces with the database.
- Features have been worked out on personal Jira site and broken into cards with an expected completion date of February 15. Screenshots of intended design have been prototyped using Figma and are on GitHub.