Clarisse Bonang

(714) 494 5280 · csgbonang@gmail.com

· LinkedIn · GitHub · Portfolio

EDUCATION

Master of Science, Computer Science, California State University, Long Beach — In progress

Master of Human Computer Interaction and Design, University of California, Irvine — September 2023

Bachelor of Science, Computer Science, Chapman University — May 2022

Certificate in Full Stack Development, Georgia Institute of Technology — August 2021

Associate in Arts, Mathematics, Santiago Canyon College — June 2019

SKILLS

- **Research Methods**: Participant interviews, diary study, prototyping, affinity diagramming, thematic analysis
- **Programming Languages:** C++, Java, C#, Python, Swift, Haskell, JavaScript, HTML, CSS
- **Software Tools**: Figma, HSPICE, GitHub, PyCharm, Docker
- **Frameworks:** React, Node, MongoDB, MySQL, jQuery, Express,Bootstrap, Unity

PROJECTS

UCI Capstone Project

- Designed and developed a prototype smart phone application used for water conservation for the Rachio company, a firm specializing in smart watering devices. Conducted stakeholder interviews, competitive analysis, literature reviews, diary studies, and user interviews. Created initial project sketches from ideation sessions as well as low-fidelity, mid-fidelity, and high-fidelity prototypes using Figma. Incorporated innovative HCI capabilities into the application to educate first-time users on water irrigation, simplify water scheduling, and unobtrusively notify users to shut off or skip watering based on sensed environmental factors and weather data. HCI features developed will be incorporated into production Rachio products.

UCI x Rachio Capstone Presentation.pdf

Engage

- Created a low fidelity prototype using Figma to improve education using IoT Devices. Process involved reading literary works to create a problem statement, designing the user empathy map, and system flowchart.

Engage Slideshow

Seeker

- Created a mid fidelity prototype and user flows using Figma for the application Seeker. Seeker is an application that supports blind and visually impaired students in achieving independence in their academic pursuits and research,

Seeker Overview Clarisse_Bonang_FinalProject_Wireframes.pdf

AR University

- Designed a mid-fidelity prototype for a personalized lab support app. Integrated Large Language Models (LLMs), Ru chatbot, and Reality Interaction Modules (RIM) to facilitate independent learning. Crafted a conceptual model and sketches, contributing to the app's development. Ru guides students without revealing solutions, while RIM aids in object identification and data collection. Implemented Augmented Reality (AR) tools to enhance engagement and provide visual support for student learning.

AR_University.pdf

Wrangler

- Conceptualized Wrangler, a wrist and arm angle detector, using an Apple Watch's accelerometer, gyroscope, and iPhone camera for precise posture detection. The application suggests tailored exercises to alleviate hand and wrist stress, monitoring user hand motion during activities. Proactively notifies users to take breaks and perform exercises during extended typing. Implemented a user empathy map, jobs-to-be-done framework, sketches, and a research insights summary to refine the prototype, focusing on simplicity and improved user experience.

Wrangler.pdf UCI | IN4MTX 282 | Project 1 Wizard-of-Oz - YouTube

No Hassle Haskell

- Developed a resource hub that introduces Haskell programming fundamentals. Topics include Haskell syntax, BNFC installations, lambda calculus, and rewrite rules.
  https://csbonang.wixsite.com/website

Rate Monotonic Scheduler

- Utilized POSIX API semaphores to synchronize POSIX threads and to set thread priority and thread attributes for a Rate Monotonic Scheduler running on Linux.
  https://github.com/bonang8/rateMonotonicScheduler

PROFESSIONAL EXPERIENCE

Lecturer, C++ Programming, Chapman University December 2022 - present

- Taught sophomore-level computer science course in C++ programming; developed lecture materials, examinations and programming assignments. Guided students in debugging their programs during office hours.

Volunteer Research Assistant, University of California, Irvine October 2022 - present

- Performed qualitative analysis, wrote programs and used web scraping tools to collect data on ADHD support communities in higher education with Dr. Anne-marie Piper and Vitica Arnold.

Research Assistant, Chapman University January 2021 - August 2022

- Developed assistive technology under the direction of a university professor; developed small software applications, performed data analysis, and tested software on mobile devices.

Project Management Intern, USS Cal Builders Engineering Division October 2017 - January 2018

- Used Computer Aided Design (CAD) system to review blueprints of buildings for a construction engineering firm. Reviewed contracts for conformance to company standards.

Private Tutor in C++ Programming and Math October 2018 – October 2022

- Provided students with study material for both subjects and assisted with their questions.

PUBLICATIONS

Co-Designing In-Home Family Displays for Co-Regulation with ADHD Children
Lucas M. Silva, Franceli L. Cibrian, **Clarisse Bonang**, Arpita Bhattacharya, Aehong Min, Elissa Monteiro, Jesus A. Beltran, Sabrina Schuck, Kimberley D. Lakes, Gillian R. Hayes, Daniel A.Epstein. Under Review at CHI 2024

Unpacking the Lived Experiences of Smartwatch Mediated Self and Co-Regulation with ADHD Children.
Lucas M. Silva, Franceli L. Cibrian, Elissa Monteiro, Arpita Bhattacharya, Jesus A. Beltran, **Clarisse Bonang**, Daniel A. Epstein, Sabrina E. B. Schuck, Kimberley D. Lakes, and Gillian R. Hayes. 2023. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23). https://doi.org/10.1145/3544548.3581316

Coauthor, *Reliable Source: Lessons From a Life in Software Engineering*, Amazon.com Services LLC. 2022
A collection of essays on software engineering.

Coauthor, "Making Computer Science Insanely Great", *PragPub*, July 2015
Describes educational programming environments and techniques for teaching programming to teenagers and children.