

BUNPHENG CHHAY

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Education

Master of Science in Software Engineering, Data Science Specialization, San Jose State University
Bachelor of Science in Computer Science, Minor in Statistics, Sacramento State University

Exp. May 2025
May 2023

CERTIFICATE

AWS Certified Cloud Practitioner, Amazon Web Services: MEMWP59DP2V4Q4C8

July 2022

SKILLS

Languages & Tech Stack: Java, JavaScript, Python, R, CSS, Figma, HTML, Node.js, React, Express, MERN Stack
Database: MongoDB, MySQL
Data Science: Pytorch, Matplotlib, Numpy, Pandas, Scikit-learn, Transformer
AWS: EC2, Lambda, S3, Amplify, Connect, Lex, Cognito, IAM, Polly, Rekognition, Sage Maker, Step Function, CF, API gateway

EXPERIENCES

Internship: Associate Solution Architect | Amazon Web Services (AWS), Seattle WA | May 2022 – Aug 2022

- Managed, developed, and deployed two applications. **Conversational Chatbot:** Developed solutions using Amazon Lex and Connect to enhance customer support and **Describe for Me App:** serverless application model for visually impaired people and showcased at **AWS re:Invent 2022**
- Successfully identified business issues and developed POC solutions with two AWS reference architectures, and demo two working prototypes
- Successfully adhered to AWS Well-Architected including security, availability, reliability, operation, performance, and cost optimization
- Designed and built an event driven distributed system for AI/ML workflow using AWS Step Functions and AWS managed AI/ML Services
- Built and deployed realtime output backend solutions with API Gateway, AWS Lambda, and AWS IAM for HTTPs API
- Built cloud storage solutions with AWS S3 for user input/data storage, AI/ML output, and to process event notification to AWS Lambda
- Built and deployed a front-end app with Amplify, JavaScript, React, HTML, CSS, Cognito, and Google Auth API to showcase prototypes
- Created Python-based coding solutions leveraging AWS Managed AI/ML services: Rekognition and Polly for Image recognition and text to speech
- Deployed Fullstack app with AWS Amplify and established a CI/CD pipeline using Amplify, AWS SDK, and AWS code commit.
- Engineered logic for conversational chatbots and call bots, addressing customer requirements using Amazon Connect, Lex, and AWS Lambda
- Conducted functional testing, prepared reports, and offered a comprehensive plan for enhancing the internal meeting app
- Collaborated with senior team members to research on Hugging Face Models using SageMaker realtime inference
- Assisted the manager in researching solutions and delivering reports to customers on data migration and CI/CD pipeline implementation

Assistant Manager | TLBU Foundation, Atlantic City, New Jersey | May 2017 – Aug 2019

- Liaised between President, VP, and Executive manager over multiple projects including high school project, property, and hotel management
- Developing and executing scalable business plans for high school and hotel including market strategy, customer relations, legal, IT and HR.
- Co-lead in property acquisition, established internal organization structure for high school project, managed cash flow and budgeting

SCHOOL PROJECTS

Movie Theater Club Application, Course: Software Systems Engineering, San Jose State | Oct 2023 – Dec 2023

- Led a cross-functional team of 3 in an agile environment, serving as the Scrum Master and taking on a developer role to guide the successful delivery of a MERN project. Responsibilities included overseeing sprint meetings, task allocation, and development efforts
- Backend Development: Took charge of the project's backend architecture, designing UML class and user diagrams, and 4 MongoDB schemas Engineered logic to enforce access control using Node.js and JS, governing multiple HTTP APIs. This architecture facilitated CRUD operations on MongoDB while ensuring data security. Implemented MongoDB active sessions to improved user experience
- Geolocation Integration: Integrated geolocation functionality using the Google Maps API to determine user's location. Calculated proximity between user location and theater locations, dynamically identifying which theaters should appear on the website based on user proximity
- Developed frontend feature including navigation bar, including the landing page, login/logout, show, booking and checkout cart
- Feature Employee Dashboard: Developed employee dashboard with the capability to query and display information about theaters This dashboard allowed users to insert, update and delete of theaters, movies, and schedules to MongoDB collections.

Facial Emotion Recognition, Course: Deep Learning, San Jose State | Sept 2023 – Dec 2023

- Utilized Vision Transformer and Pytorch for fine-tuning tasks in Facial Expression Recognition using the RAFDB dataset achieved 86% accuracy
- Adapted the model by modifying the output layer to accommodate the seven classes of facial expression classification and implemented data augmentation techniques, including flips, crops, color adjustments, and rotations. Added checkpoint for reproducibility and efficiency
- Fine-tuned hyperparameters, incorporated adjustment of the learning rate, cross-entropy loss, early stopping for optimal model performance
- Developed a Colab Notebook that demonstrated the entire workflow, from data loading to training, testing, and inference, and live demo

Barbershop Website, Course: senior project, Client: Ace's Barbershop, Sacramento State | Aug 2022 – May 2023

- Served as the team lead for a 4-member frontend development team, fostering collaboration with the backend team to successfully deploy and deliver a web application to the client. Utilizing Jira for sprint planning, and efficiently managing the product backlog
- Leveraged Figma for comprehensive wireframe design and utilized industry-standard technologies, including React, JavaScript, HTML, and CSS, to implement frontend logic. Employed AJAX for seamless data retrieval from MongoDB. Configured app navigation with Browser Routes, developed key components such as the navigation bar, user profiles, homepage, and services section

Oscar Rating project, Course: Software Engineering Fundamental, Sacramento State | Aug 2020 – Dec 2020

- Developed a Python script to extract info from CSV data, utilizing this data to perform targeted queries on a large dataset from the OMDb API
- designed and implemented an internal SQL database for efficient data storage and frontend information retrieval

AWARDS and HONORS

- Won the first-place of 2022 inaugural WWCS Intern PRFAQ contest on "Most likely to become an Amazon feature", AWS
- Dean's Honor Roll: Spring 2020, Fall 2020, Fall 2022, Fall 2023 at The College of Engineering and Computer Science, CSUS
- Dean's List: Fall 2017, Spring 2018, Fall 2018, Spring 2019 at ACCC, NJ