

Daniel Chew

Senior Software Engineer

San Francisco, CA, United States | [LinkedIn](#) | [GitHub](#)

Software engineer building blockchain infrastructure and tokenized real-world asset systems, with experience scaling financial data systems from 0 to production at scale.

EXPERIENCE

Senior Software Engineer

Mar 2026 — Present

Robinhood

Menlo Park, CA

One of three engineers on Robinhood Chain, a blockchain optimized for real-world assets. Built the sanctions pipeline and blocklist system handling compliance and security, generating \$3.6M in fees within 30 days and reaching \$900M TVL. Contributed to Stock Tokens infrastructure, achieving \$600M TVL in two weeks with 32K unique holders. Developed oracle pause systems and wallet infrastructure for Robinhood Wallet, which ranked fourth by DEX trading volume.

Software Engineer

Sep 2021 — Aug 2025

Douro Labs/Pyth Data Association (Pyth Network)

Global

Joined as first engineering hire and worked full-stack across website and backend systems. Migrated production database from Timestream to ClickHouse, reducing query time by 4x and costs by 3x. Built end-to-end data infrastructure including ingestion pipeline and historical price service used by thousands of protocols. Developed publisher ranking algorithm, rebuilt main website in Next.js, and deployed smart contracts across EVM, TON, and Fuel networks. Created Dune dashboards with 100k+ views and led technical workshops for 100+ developers across multiple countries.

Core Contributor

Sep 2021 — Aug 2025

Pyth Network

Engineer #1 at Pyth Data Association contributing to Pyth Network, a decentralized oracle network initially incubated by Jump Trading, where I built core infrastructure powering a leading first-party data oracle network across multiple blockchains. Subsequently joined the engineering spinout to Douro Labs to continue scaling and evolving the network.

Software Engineer

Sep 2021 — Aug 2023

Pyth Data Association

Global

Associate Cloud Architect

Sep 2020 — Sep 2021

Amazon Web Services (AWS)

Singapore

Achieved all 12 AWS certifications within 7 months. Developed proof of concept for local government using AWS Nitro Enclaves to protect sensitive data including PII and healthcare information. Implemented serverless data lake with RDS, S3, Glue, and Athena. Deployed multi-account landing zone strategy with central logging and provisioned infrastructure automation through AWS Control Tower.

Orbital Advisor

May 2018 — Sep 2018

National University of Singapore

Stockholm, Sweden

Orbital (a.k.a., CP2106: Independent Software Development Project) is the School of Computing's (SoC) 1st year summer self-directed, independent work course. This programme gives students the opportunity to pick up software development skills on their own, using sources on the web. SoC provides the Orbital framework for helping students stay motivated and driven to complete a project of their own design, by structuring peer evaluation, critique and presentation milestones over the summer period.

As an advisor, I act as a peer assessor and cheerleader for teams taking Orbital. I am also involved in evaluating the progress of a few Orbital teams every month and guide those teams through the project.

Software Engineer

Jan 2018 — Dec 2018

ChromaWay

Stockholm, Sweden

Full-stack developer building applications with Postchain blockchain platform. Worked on Rell compiler development, translating domain-specific language to SQL with improved type safety and up to 7x code compaction. Created detached contract template system for legal documentation and developed Green Assets Wallet, the world's first blockchain platform for green bond validation and impact reporting. Handled testing, deployment automation, and presented to 100+ person audience.

Military Police Specialist

Nov 2014 — Dec 2016

Singapore Armed Forces (SAF)

Singapore

The Singapore Armed Forces (SAF) is the military arm of the Total Defence of the Republic of Singapore; as well as the military component of the Ministry of Defence.

I enlisted as part of Singapore's mandatory National Service which is a statutory requirement for all male Singaporean citizens and second-generation permanent residents to undergo a period of compulsory service in the uniformed services. I was deployed in the Ammunition Depot as a Guardroom Commander, leading a team of 7 soldiers, overseeing the security of the camp.

EDUCATION

National University of Singapore

Bachelor of Computing in Computer Science

Distinction. Focus area in Software Engineering.

PROJECTS

BYRD - Food Waste Management Solution

BYRD is on a mission to achieve zero food waste in Southeast Asia's Food and Beverage (F&B) industry. F&B operators (e.g cafes) dispose up to 15% of their daily food supply. This food wastage has significant negative impact on our environment and puts unnecessary cost pressure on businesses.

BYRD aims to alleviate this problem by combining the power of computer vision, machine learning and IoT. The BYRD "Food Waste Management System" is a one-stop shop for effective food waste minimization. F&B operators can onboard simply by importing their menu of raw ingredients and key information, such as minimum order required. Then, just attach our hardware setup of a camera and weight sensor to their garbage bins to implement the solution. After kitchen staffs dispose of their food waste, it will be weighed, photographed, and automatically classified by our machine learning algorithm. Our data analytics system then generates actionable business insights and recommendations for F&B outlets to optimize their procurement, supply chain and kitchen prep processes.

BYRD is especially attuned to the challenges of small-medium F&B operators in Southeast Asia, such as cost required to purchase expensive and complicated solutions, limited access to tech-savvy labour and high labour turnover rate. In response, BYRD offers a nimble, lightweight and inexpensive solution that provides maximum automation and little staff training required.

BYRD is built by a team of software engineers and business strategists who are passionate about technology and sustainability. This is proudly made possible by integrating a full suite of AWS toolkits, – AWS Amplify, Amazon CloudFront, Amazon CloudWatch, Amazon API Gateway, Amazon Cognito, AWS Lambda, Amazon DynamoDB, Amazon Rekognition, Amazon Simple Storage Service and Amazon Mechanical Turk.

BYRD paves the way for the F&B industry towards a future of zero waste. Join us on our journey to improve businesses and the environment.

Group Photo Selection with Computer Vision

Our system consists of 3 modules; detecting movements, detecting eye-blinking, detecting hand poses. We receive 5+ continuously taken photos as input and rank them by our criteria. The three criteria that we came up with after extensive research is as follows: everyone in the group photo are stationary, everyone in the group photo are non-blinking, and lastly, everyone in the group photo present the same motion. We will then detect movements by using our modified implementation of Gunnar Farneback algorithm in Python to determine dense optical flow in the set of images. Detection of eye-blinking is achieved by implementing the Histogram of Oriented Gradients (HoG) Face Detection model, facial landmark detector with lib, and Eye Aspect Ratio (EAR) algorithm. Detection of hand poses is achieved by object localisation and classification using deep learning. Our results for detecting movements showed 90% accuracy, while detecting eye-blinks showed 83% accuracy. For detection of hand poses, hand localisation showed 77% accuracy and pose detection showed 45% in average accuracy.

P&G Studio 3 Senior Consumers and VMS study proposal with Live Well Collaborative – Singapore (LWC-S)

For this studio, my team and I sought to understand the habits and opinions of nutrition and diet of the Indian national. Field research trips to Little India, Singapore were conducted to help us understand what nutrition and diet means to the Indians. An in-depth study was then conducted in Mumbai, India where we met 12 respondents. The study trip was planned to exercise our interview techniques, communication skills and also find ways to uncover insights. We also had opportunities to conduct 10 digital interviews with respondents from Bangalore, India for qualitative research.

Social Innovation Project in Vietnam with Singapore Polytechnic (SP)

For this project, Singapore Polytechnic collaborated with four Vietnamese colleges, namely, Phu Lam college, Thu Duc college, Nam Saigon college and Nguyen Huu Canh college. I, along with other students and lecturers, spent 3 weeks in Ho Chi Minh, Vietnam. While there, we immersed ourselves in their host country by learning the Vietnamese language, culture, history, and economy in the first week. We experienced Vietnamese culture up-close at the most personal level possible with the homestay system. As guests of the Vietnamese families we were paired with, we were intertwined with the fabric of Vietnamese daily life. More importantly, we developed a deep user empathy that is invaluable when proposing appropriate business ideas for the Mekong Delta villagers. We spent two weeks in the Mekong Delta region to make a meaningful contribution to the local communities there. We also applied the Business Design tools and techniques we had acquired in the classrooms to explore ways the villagers can improve their income and quality of life.

CERTIFICATIONS

Finalist (Top 5) | AWS Hackdays Online 2020 - Singapore, Amazon Web Services (AWS)

Jul 2020

AWS Certified Advanced Networking – Specialty, Amazon Web Services (AWS)

AWS Certified Database – Specialty, Amazon Web Services (AWS)

AWS Certified Machine Learning – Specialty, Amazon Web Services (AWS)

AWS Certified Alexa Skill Builder – Specialty, Amazon Web Services (AWS)

AWS Certified Data Analytics – Specialty, Amazon Web Services (AWS)

AWS Certified Security – Specialty, Amazon Web Services (AWS)

AWS Certified DevOps Engineer – Professional, Amazon Web Services (AWS)

AWS Certified Solutions Architect – Professional, Amazon Web Services (AWS)

AWS Certified SysOps Administrator – Associate, Amazon Web Services (AWS)

AWS Certified Developer – Associate, Amazon Web Services (AWS)

AWS Certified Solutions Architect – Associate, Amazon Web Services (AWS)

AWS Certified Cloud Practitioner, Amazon Web Services (AWS)

SKILLS

Software Development · Web Development · Social Media Marketing · Entrepreneurship · Java · JavaScript · HTML · CSS · C · Swift · Node.js · MATLAB · LaTeX · Python · Vue.js · Express · Promela · React · Git · Cloud Computing · Blockchain · Selenium · Rust · Solidity · FunC · Sway · Next.js · Tailwind CSS · AWS · React Native · Expo · ClickHouse · Postgres · DynamoDB · Firebase