

Aroop Biswal

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EXPERIENCE

Software Engineer, *Monetization*

Jan. 2025 – Present

Meta

Menlo Park, CA

- Independently designed and shipped backend **end-to-end ad delivery optimizations** across major page types, increasing global advertising revenue by **+0.030%**, driving **~\$59.1M** annually
- Built and led development of a leading org-specific internal **AI agent (54+ users)** within a 100+ engineer Ads organization, driving **4,500+ hours/year** in productivity gains through automated experiment querying/analysis.
- Integrated the AI agent into the existing MetaMate platform by developing and shipping **React frontend components (Flow-typed)**, enabling end-to-end user workflows.
- Extended automated code maintenance tooling, achieving a **39x increase in stale code removal**, reducing technical debt and accelerating deployment velocity.
- Built a latency monitoring dashboard and data pipeline for key backend processes, cutting time to identify highest-impact latency improvement opportunities by **~80%**.

Machine Learning Engineer Intern

Aug. 2024 – Sep. 2024

Meaku AI

San Jose, CA

- Developed a robust RAG agent, overseeing the public launch on a client's website with **20k+ monthly visitors**.
- Implemented dynamic prompt generation tailored to conversation context, **reducing response latency by 15%**.
- Fine-tuned OpenAI and Anthropic LLM models** using a curated dataset of 150 conversations selected from over 1000+ conversations, based on factors such as conversational flow, clarity, and relevance to target use cases.
- Built a knowledge base creation pipeline using Firecrawl for webscraping, automating the process end-to-end.

Software Engineer Intern

Jun. 2023 – Sep. 2023

Valley Tech Systems

Folsom, CA

- Led a team of three interns in developing machine learning components, building an end-to-end data pipeline to collect and label 4,000+ training images.
- Implemented data augmentation and model tuning techniques, training a TensorFlow-based object classification model achieving **0.86 test accuracy** and integrating it into the company's commercial product.

Software Engineer Intern

Jun. 2022 – Sep. 2022

Intel Corporation

Hillsboro, OR

- Constructed a video-processing pipeline using GStreamer for use in video chat applications.
- Wrote a custom python extension to **perform AI Inferencing and generate real-time video effects**.
- Used Docker to containerize and port the pipeline from a native Linux environment to WSL 2.0.

EDUCATION

University of California, Davis

Sep. 2020 – Jun. 2024

Bachelor of Science in Computer Science and Engineering

Davis, CA

- Accolades – **UC Davis Regents Scholarship**, UC Davis University Honors Program, Dean's Honor List
- Relevant Coursework – Computer Vision, Embedded Systems, Algorithms, OS & System Programming

EXTRACURRICULARS

Full Stack Software Engineer @ Aggieworks

Mar. 2023 – Jun. 2024

- Spearheaded the launch and growth of Clubly, expanding its user base from inception to over **2,000 students**.
- Implemented backend functionalities such as semantic search and querying with filters using the pgvector and Go.
- Heavily contributed to frontend development using Svelte and added Amplitude Analytics integration to identify user trends.

TECHNICAL SKILLS

Languages: C/C++, Python, Rust, Java, Javascript/Typescript, Scala, Flow, HTML/CSS, R, Go, Kotlin, Swift, Obj-C

Backend & Data: Go, Python, Postgres, DynamoDB, Kafka, Beam, Flink, Redis, REST APIs, gRPC, Spark

Infrastructure: AWS, ECS, Lambda, Docker, Kubernetes (K8s), Nginx, Linux, Bash

Development Frameworks: React, React Native, Node, Express, Angular, MongoDB, Vue, Flask, Svelte, Next.js

AI/ML Frameworks: TensorFlow, OpenCV, PyTorch, Keras, ONNX, DirectML, LangChain, pgvector, Pandas

Software Tools: Git/Github, Jira, VScode, MATLAB, Unity, Blender