Aayush Agarwal

Engineering @ Avoca AI | Ex - SDE3 @ Hyperverge

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PROFESSIONAL EXPERIENCE

AVOCA AI (YC W25)   May 2025 - Present

Software Engineer
- Architected a configurable Prompt Orchestration system for LLM-based Voice Assistants, reducing customer onboarding time f**rom 4 - 5 days to under 1 minute**.
- Built a real-time Call Debugger platform enabling rapid tracing and issue diagnosis, reducing call-level bug resolution time from **hours to less than 5 minutes**.
- Maintained, designed and deployed Voice AI Agents, Web Chat, and HITL responder systems integrating **OpenAI**, **Claude**, and **Gemini** APIs with structured fallback and evaluation pipelines.
- Scaled, managed and led a **14+ member** team, overseeing sprint planning, technical mentorship, hiring, and delivery excellence.
- Expanded deployed engineering team **from 5 to 20+ members**, improving deployment velocity and customer onboarding throughput.

HYPERVERGE TECHNOLOGIES   January 2021-May 2025

Software Engineer 3   (April 2025 - May 2025)
- **Developed a Dynamic Rate Limiter** system capable of handling varying load patterns adaptively reducing **false positives** by nearly **100%**

Software Engineer 2   (April 2023 - March 2025)
- Lowered AWS costs by **~$30k per month** through resource allocation, instance rightsizing, efficient scaling, improved utilization, and cost management strategies, ensuring optimal cloud performance and reduced waste.
- Deployed an automated **mirroring** and analysis system, eliminating products **downtime** for over a year, reducing manual effort by **95%**, removing DevOps dependency, and ensuring infrastructure stability through API and alarm testing.
- Built an automated AI model analysis and benchmarking platform, **reducing False Acceptance and Rejection Rates to nearly 0%**. Expanded it to support diverse client benchmarking and reporting needs.
- Led **InfoSec** activities (VAPT, RL Review, IP Whitelisting etc) ensuring **safety** and **vulnerability** free systems.
- Orchestrated engineering Proof of Concept phases for clients like **SHB Finance**, **Tekion** etc, ensuring seamless integration and reduced system errors by **>90%** within a week.
- Integrated deep-fake and anomaly models in liveness systems and added metadata based custom logic to **reduce** fraudulent cases by **>95%**
- Partnered in **moving** a product from AutoScaling based system to Kubernetes resulting in over **83% faster** deployments
- Wrote a multi-platform request and response payload encryption module to ensure **100%** payload integrity
- Designed a Shopfront API service to extract, match, and validate shop details from images, including GST number and location verification, supporting 2+ clients with an ongoing POC.
- Supported major client go-lives like **LinkedIn**, **Zomato**, **HFC** etc, ensuring **99.9%** uptime and achieving over **90% conversion rates**.
- **Lead a POD** of **4 members**, gathering and prioritizing requirements, planning and conducting **sprints** and contributing to the success and growth of the POD members.
- **Mentored ~12 teammates and interns**, promoting a culture of skill refinement and knowledge sharing within the team
- **Supervised technical interviews** for offline campus hiring (VIT, SRM, JIT, IIIT etc) resulting in selection of **3** high-potential candidates aligning with organizational goals.

Software Engineer 1   (July 2021 - April 2023)
- Designed a Global KYC stack supporting **195+ countries** and processes **500+ diverse cards**
- Distilled responses, providing real-time actionable insights **reducing** the manual review effort by **more than 90%**
- Orchestrated AWS deployment with CI/CD pipelines and Docker containers, **cutting down deployment times by 40%** and enabling rapid development-to-production transitions.
- Pioneered the low-code Global WebSDK, streamlining frontend operations for KYC APIs, reducing client

integration efforts by **78%**, onboarding **50+ clients**, and driving adoption in India's <u>insurance</u> and <u>crypto markets</u>.

- Built intuitive SDK workflows, boosting **user engagement by 42%** and **reducing drop-off by 60%**.
  Optimized testing with <u>Puppeteer</u>, **cutting manual testing time by 50%** and **lowering bug reports by 33%**.
- Architected and established a Serverless architecture using AWS Lambda, leading to **80% more efficient resource utilisation**
- Optimized systems with ELK, Grafana, MetaBase, and Sentry, **reducing internal errors by 87%** and **enhancing customer satisfaction** through data-driven decision-making, performance analysis, and user insights.

Intern (January - July 2021)

- Innovated a **No-Code AI Platform** for OCR Model Generation (HyperTuring) leading to **85% reduction** in the time required for model deployment and benchmarking.
- <u>Advanced Generic OCR</u> system that **increased** OCR extraction **accuracy by 27%**
- **Improved** the existing android onboarding application to support new features and 1 new country

JIDOKA TECHNOLOGIES   April - May 2020

Intern

- Developed the **Kompass** Android Application for AI-Driven Defect Detection resulting in **lowering** inspection time by **64%**

EDUCATION

- **Vellore Institute of Technology:** B.Tech in Computer Science | GPA: 9.15 (2017–2021).
- **St. Augustine's Day School:** Higher Secondary (93.25%) | Secondary (94.40%).

SKILLS

<u>Hard Skills</u>

- **Programming Languages & Runtime:** JavaScript, TypeScript, Python, Node.js
- **Frontend Technologies:** React.js, Next.js
- **Backend & API Frameworks:** Express.js, Socket.io, FastAPI
- **Cloud & Infrastructure (AWS):** EC2, Lambda, API Gateway, S3, IAM, SQS, DynamoDB, RDS, Step Functions etc.
- **DevOps & Automation:** Docker, Kubernetes, CI/CD (GitHub Actions), Terraform, Serverless Framework, Vercel
- **Databases & Analytics:** MongoDB, PostgreSQL, Supabase
- **Observability**: ELK, Metabase, Grafana, Sentry, AWS X-ray, Datadog
- **AI & LLM Systems:** AI Agents, OpenAI, Gemini, Anthropic Claude, LLM Prompting, LangChain, Phidata

<u>Soft Skills</u>

- **Leadership & Mentorship**: Guiding teams, mentoring junior engineers, fostering technical growth
- **Effective Communication**: Clear technical documentation, stakeholder collaboration, cross-team coordination
- **Problem-Solving & Decision-Making**: Root cause analysis, strategic thinking, risk assessment
- **Collaboration & Teamwork**: Agile development, cross-functional alignment, conflict resolution
- **Project & Product Ownership**: Driving initiatives, prioritizing tasks, ensuring timely delivery
- **Attention to Detail**: Code reviews, quality assurance, identifying edge cases and potential failures
- **Adaptability & Continuous Learning**: Staying updated with new technologies and improving processes

HONORS

- Titled as **Best Mentor 2024** at Hyperverge Academy
- Received **"Exceptional" Employee** rating for **2 consecutive years** of appraisals.
- ET CAMPUS STAR - **Top 200** candidates among **50000+ candidates**.