

ARNAV GOEL

SOFTWARE ENGINEER | BACKEND, FULL-STACK & APPLIED AI | NUS CS 2027

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Final-year NUS Computer Science student graduating May 2027; built secure internal platforms, deployed retrieval systems and a Chrome extension used by approximately 1,000 people.

EDUCATION

National University of Singapore

Expected May 2027

Bachelor of Computing (Honours), Computer Science

Coursework: Data Structures & Algorithms, Operating Systems, Databases, Machine Learning, Natural Language Processing

Recognition: National Rank #1, DXC Technology Coding Challenge

TECHNICAL SKILLS

Languages: Python, Java, TypeScript/JavaScript, SQL, Rust, Swift

Software: Flask, React/Next.js, REST APIs, MySQL/PostgreSQL, authentication/RBAC, concurrency, AWS, Docker, Git/Linux, CI/CD

AI/ML: PyTorch, Transformers, RAG, embeddings/vector search, BM25, agent/tool calling, offline evaluation

EXPERIENCE

iEnergy Digital

Jul 2026 - Aug 2026

AI Engineer Intern | Python, LangChain, Next.js, PostgreSQL, AWS

- Deployed an AWS EC2 retrieval-augmented interface over an incident knowledge base, combining embeddings, retrieval and tool use to return source-grounded answers.
- Built read-only text-to-SQL for nested incident data and hybrid vector/BM25 retrieval; created a golden-set offline evaluation harness and converted clustered failures into targeted few-shot repairs.

National University of Singapore, Information Technology

Jan 2026 - Jun 2026

Software Engineer Intern, Network Automation | Python, Flask, React, MySQL

- Shipped features across **3 internal platforms** for network compliance, delivery and procurement; implemented SAML SSO, rotating JWTs, CSRF protection, per-route RBAC and audit logging.
- Built a cancellable synchronization engine with an **8-worker pool**, module-level locks and abort events; integrated six enterprise systems and validated changes against **167 backend tests**.

Interactive 3D Design Lab, NUS | Clinical collaboration with NUH

Apr 2025 - Jan 2026

Spatial Computing Developer & Undergraduate Researcher | Swift, SwiftUI, RealityKit, visionOS

- Built a Vision Pro Bells Test with **135 3D targets**, gaze/pinch selection and automated timing, regional precision/recall and scan-path analysis.
- Implemented local-Wi-Fi discovery, state sync, clinician iPad control and report transfer; piloted with **30+ stroke patients** at NUH and Alexandra Hospital and co-authored an ISMAR 2026 submission.

Klimacap

Sep 2025 - Dec 2025

AI Developer Intern | JavaScript, LLM workflows

- Built a multi-stage LLM research pipeline that produced source-grounded M&A company and industry reports in DOCX with inline citations.

Aurionpro Solutions

May 2025 - Jul 2025

Software Engineer Intern | PL/SQL, Oracle, Java

- Automated PL/SQL releases across Dev, SIT and UAT with reusable wrappers; shipped SmartLender Commercial UI features and prototyped extracting services from an Oracle/Java monolith.

Source Academy, NUS

Apr 2025 - May 2025

Lead Software Developer | TypeScript, React, Elixir

- Maintained production CI/CD for TypeScript/React and Elixir services; diagnosed failures, reviewed and merged contributions, and mentored developers through releases.

SELECTED PROJECTS

Select to AI

[Chrome Web Store](#) | [GitHub](#)

Chrome extension | JavaScript | Manifest V3

- Built and maintain a local-first extension that sends selected text to ChatGPT, Gemini or Perplexity; reached **approximately 1,000 users** and Chrome Web Store **Featured** status.
- Built a browser agent that plans and validates cross-tab tasks with exact-origin permissions, local API keys and confirmation gates; passed a **10-case adversarial security benchmark**.

GUS - Autonomous Company-Intelligence Pipeline

Python | multi-agent research

- Built a due-diligence pipeline that plans research and runs financial, legal, news and risk agents in parallel; claim-level provenance and fail-closed validation suppress unsupported findings.

Confidence-Gated Reranking for Extractive QA

[GitHub](#)

PyTorch | Transformers | SQuAD

- Fine-tuned RoBERTa on SQuAD to **84.28 EM / 90.93 F1**; confidence-gated reranking of 55/10,570 predictions raised scores to **84.40 EM / 91.04 F1**.