Suman Datta

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EDUCATION

Monash University **Expected: Nov. 2025**
Bachelor of Software Engineering (Honours) *Selangor, MY*

- **cGPA: 3.448**
- **Relevant Coursework:** Data Structures and Algorithms, UI/UX, Operating Systems, Parallel Computing, Databases, Data Science, Cybersecurity, Web Development, Electronics and Microcontrollers, Embedded Systems, CI/CD (DevOps), Big Data (Apache Kafka & Spark), Computer Networks.
- **Activities and Leadership**: founding member of the Monash University Startup Club where I connected with local founders, inviting them to speak at the club's events which regularly drew over a hundred attendees.

WORK EXPERIENCE

DÜRR NDT GmbH & Co. KG **Nov. 2024 – Feb. 2025**
Software Engineering Intern | instaNDT.com *Selangor, MY*

- DÜRR NDT Malaysia develops innovative software solutions for image acquisition and analysis as well as for secure data archiving for industrial radiography.
- Implemented a frontend download feature for converted, rendered DICOM images to PNG / JPEG, consolidating the backend to enable this.
- Led an effort to improve the code quality and long-term maintainability of the codebase by enforcing the recommended ruleset of typescript-eslint static analyser, refactoring large portions of the codebase in the process.
- Implemented a real-time interactive image editing tool, enabling essential workflows for DICOM image industrial radiological evaluations.
- Piloted a stacked-diff workflow using Jujutsu (jj), enabling focused reviews while allowing continuous iteration.

PROJECTS

36-Key Split Ergonomic Mechanical Keyboard

- Designed and built a custom 36-key split ergonomic keyboard tailored to the Miryoku layout, modifying the existing 38-key "TOTEM" keyboard design.
- Designed a custom PCB in KiCAD and designed a custom 3D-printed enclosure using Autodesk Fusion.
- Sourced all electronic and mechanical components, self-taught soldering for assembly, and successfully built a functional keyboard.
- Successfully flashed the Zephyr-based ZMK framework for the MCUs and wireless dongle.

DIY Home CCTV

- Designed and deployed a self-hosted surveillance system using Hikvision PoE cameras and Frigate (NVR).
- Ran on a low-power mini-PC (Intel N100) with Proxmox VE; integrated a Google Coral TPU to accelerate on-device inference.
- Designed and installed Cat 6 infrastructure: punch-down blocks, field terminations, and RJ45 connectors.

SKILLS & INTERESTS

- **Technologies:** Linux, Jujutsu (jj-vcs), SvelteKit, D3.js, Containerisation (Docker), KiCAD, Autodesk Fusion, Proxmox, SQLite, PostgreSQL, Apache Kafka & Spark, OpenMPI, OpenMP, dotnet (.NET), PLC.
- **Languages:** HTML, CSS, JavaScript (TypeScript), SQL, Python, Java, C, Ruby, Haskell, AVR Instruction Set.
- **Interests:** Cooking, Electronics, Instant Photography, Machining, Semiconductor Industry, Astronomy, PC Building, 3D printing, Ergonomics, Modded Minecraft.