Mruthulan Senthil Nathan

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Full-stack developer internship | Available late Mar. 2027

EDUCATION

Singapore Polytechnic Expected May 2028
Diploma in Information Technology

SELECTED PROJECTS

SignalBridge - Champion, Dell InnovateDash 2026 Jun. 2026
Youth support platform | *Next.js, FastAPI, PostgreSQL* | *Team of four* | Project | Code

- Built youth chat, sign-in and dashboard features in Next.js, integrating authentication and saved conversations with the team's FastAPI backend.
- Implemented a handoff preview and consent flow so young people could review the prepared note before granting permission for worker review.
- Extended intake to Discord with thread-based routing, onboarding and database migrations; added pytest integration tests for message routing and intake.

Better Call Bhai Apr. 2026 | Private pilot
Independent barbershop booking platform | *Node.js, Express, SQLite* | Project

- Independently built a booking prototype for a local barber managing appointments through WhatsApp; secured the owner's participation in a private pilot.
- Deployed service and time-slot booking, an Express API and an owner admin page on Render, with a WhatsApp link to booking details.
- Prevented duplicate booking slots using a SQLite uniqueness constraint and rejected past-date bookings through server-side validation.

MEANT Aug. - Sept. 2026
Assistive communication app | *2nd Runner-Up, Dell InnovateFest 2026* | Project

- Designed colour-coded symbol boards, vocabulary search and onboarding to help users compose replies beyond the app's AI suggestions.
- Presented the team's application, which received the S$3,000 polytechnic-category prize and was featured in Tamil Murasu.

Boss Breaker Dec. 2025 - Feb. 2026
Solo coursework | *Wellness game* | *JavaScript, Express, MySQL* | Code

- Built the frontend, REST API and MySQL database for challenges, boss raids and inventory, with server-side game calculations, bcrypt password hashing and JWT-protected routes.

TECHNICAL SKILLS

- **Web:** TypeScript, JavaScript, React, Next.js, Node.js, Express, HTML/CSS
- **Backend and data:** Python, FastAPI, REST APIs, SQL, PostgreSQL, MySQL, SQLite
- **Tools:** Git, GitHub, pytest, Render

LEADERSHIP

Secretary, Youth Harmony Chapter subcommittee Jun. 2026 - Present
SP ACER, Singapore Polytechnic May 2025 - Present

AWARDS

- **Champion, Autodesk Singapore Hackathon 2026** - Built and delivered the presentation for KnowCad, the team's customer service AI assistant.