Sean Parkinson

Software Engineer | Computer Science Student

portfolio@seanparkinson.net seanparkinson.net Sydney, Australia

SUMMARY

Computer Science student leading a 3-person team to deliver client-facing software projects while studying full-time at UTS. Skilled in systems-level programming (C/C++) and full-stack development (Python, .NET, React), with hands-on experience in project scoping, client interaction, and end-to-end delivery. Seeking part-time or flexible software engineering roles at established companies to deepen technical expertise while maintaining client engagement.

TECHNICAL SKILLS

Languages: C/C++, Java, C#, Python, TypeScript/JavaScript, SQL
Frameworks & Tools: .NET, React, OpenGL, SvelteKit, Git, Docker
Data & Systems: Azure, SQL Server, NumPy/SciPy, REST APIs, Linux

PROFESSIONAL EXPERIENCE

Industrial Sciences Group (ISG) 07/2025 – Current
Lead Software Engineer (Promoted after 4 Months)
Applied R&D engineering consultancy working with industrial and defence clients.

Advanced Ground-to-Ground RF Propagator
- Led a 3-person team delivering a Python-based RF propagation modeling prototype for a client.
- Developed elevation + atmospheric loss models and integrated environmental attenuation methods from IEEE/ITU references.
- Automated SNR calculations for transmitter/receiver pairs across varied terrain, reducing manual field testing requirements.

Health Infrastructure Asset Bidding Assistant
- Delivered a full-stack estimation tool (Python backend, Svelte frontend) for healthcare infrastructure planning, collaborating with SMEs for validation.
- Implemented calculations defined by Australian Standards (AS) and AusHFG documents.
- Automated predictions for 140+ assets per facility, replacing manual spreadsheet-based estimation and reducing error risk for planning teams.

PROJECTS

Voxel Rendering Engine | Java, OpenGL
- Modernizing a legacy Minecraft 1.2.5 (Java 1.6) codebase with optimized rendering pipeline using binary greedy meshing and per-fragment lighting.
- Cut mesh memory usage and doubled frame rate through chunk-level batching and reduced vertex overhead.
- Implementing multi-threaded mesh generation and low-level memory optimisation techniques.

TeamTrack (In Progress) | .NET, React, SQL
- Building a full-stack time tracking tool with role-based authentication (contractor/manager).
- Designing REST APIs and relational schema to support time logs, breaks, and project-level reporting.
- Backend-first architecture targeting a minimal deployable MVP.

EDUCATION

Bachelor of Computer Science (Honours) 02/2024 – Present
University of Technology, Sydney Expected 2027

Bachelor of Electrical Engineering (Honours) and Science (Computer Science) 02/2023 – 11/2023
University of New South Wales
Transferred to UTS to focus on software development.

REFERENCES

Available upon request.