

Ridge Tagala

Truganina, VIC 3029

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WWW: Personal Website

Aspiring Software Engineer with hands-on experience in full-stack development, backend systems, and real-time applications. Proficient in JavaScript, TypeScript, Python, and C/C++, with a strong foundation in object-oriented programming, data structures, and software architecture. Experienced in developing scalable web applications, designing RESTful APIs, and deploying cloud-based solutions using AWS and Firebase. Familiar with Linux-based development, asynchronous programming, and robotics frameworks such as ROS2. Collaborative team player with experience in agile environments, version control, and continuous integration. Seeking a Software Engineering Internship to contribute to impactful projects and expand expertise in backend systems, cloud infrastructure, and modern development practices.

Technical Skills

- **Programming Languages:** JavaScript, TypeScript, Python, C/C++, Java
- **Databases:** MySQL, SQLite
- **Cloud & DevOps:** AWS, Firebase, Git, GitHub, CI/CD
- **Documentation:** Technical Writing, Report Creation, Clear Code annotation
- **Frameworks & Libraries:** React, Node.js, Express, JavaFX, Vite
- **API Development:** RESTful APIs, GraphQL
- **Software Design:** Data Structures, Algorithms, Modular Architecture
- **Soft Skills:** Analytical Reasoning, Problem-Solving, Time Management, Team Collaboration, Communication

Projects

Star Wars Character Explorer – *TypeScript, React, Vite, CSS*

Developed a responsive web application to search and display characters from the Star Wars API.

- Integrated external API and implemented dynamic search and pagination features.
- Emphasized scalability and maintainability using TypeScript and modular architecture.
- Utilized React hooks and Vite for efficient frontend development.

Repository: <https://github.com/Ridge19/FullStackDev-APICall-Example>

Discord Bot – *Python, yt-dlp, ytmusic API, discord API*

Built a feature-rich Discord bot in Python using the Discord API, yt-dlp and YouTube Music API to enable music playback directly within voice channels.

- Built a fully functional Discord music bot in Python using discord.py, yt-dlp, and YouTube Music API, enabling high-quality audio streaming in voice channels.
- Designed and implemented modular, object-oriented architecture to support scalable features like playback control, queue management, and vote-based skipping.
- Containerized the application with Docker for streamlined deployment and consistent development environments.

Repository: <https://github.com/Ridge19/Discord-bot>

Memory Allocation Simulator – *C, Bash*

Simulated Best Fit and First Fit memory allocation techniques to mimic OS behaviour.

- Managed memory using linked lists and dynamic allocation in C.

- Created shell scripts to automate test case generation and performance logging.
 - Enhanced understanding of low-level memory management and data structures.
- Repository: <https://github.com/Ridge19/OS-Assignment2-Sem2-2024>

Work History

Software Engineer

RMIT Rover Team, RMIT Building 253

July 2025 - Current

- Contributing to autonomous rover systems with a focus on navigation, obstacle avoidance, and precision control of scientific instruments.
- Assisting in the development of Python and C++ code in a Linux environment for motion control and sensor fusion modules.
- Gaining hands-on experience with ROS2 nodes for sensor input, actuator control, and SLAM-based localization.
- Exploring asynchronous programming techniques to improve sensor data responsiveness in real-time control systems.
- Supporting testing efforts to improve path-planning algorithms, aiming to reduce obstacle collision rates in autonomous navigation.

Full Stack Developer

BusinessLocal, Cheltenham, VIC

February 2024 - Current

- **Resolved 95% of reported bugs within 48 hours**, ensuring stable and reliable code.
- **Managed 4+ major development milestones**, delivering features on time and within scope.
- **Built and maintained backend systems** for 3 client platforms using NodeJS, Express, and ORM.
- **Developed RESTful APIs**, enabling **20% faster** frontend integration and deployment.
- **Led CI/CD and deployment processes**, reducing update downtime to under **2 minutes**.

Assistant IT Lead

Lifestyle Markets Australia, Melbourne, Victoria

November 2024 - Current

- **Assisted manager with daily operations**, improving task turnaround by **25%** through streamlined processes.
- **Handled 50+ calls daily**, efficiently processing customer and internal requests.
- **Led automation of office tasks**, reducing manual workload by **30%** and improving documentation efficiency.
- **Trained and supervised 5+ staff**, boosting policy compliance and productivity.
- **Supported cross-department projects**, contributing to a **15% improvement** in service delivery.

Peer Mentoring (CSIT)

RMIT University, RMIT University

March 2023 - July 2025

- Supported **20+ mentees academically and personally**, boosting confidence and engagement across subjects.
- **Resolved 95% of mentee queries within 48 hours** using analytical problem-solving skills.
- **Increased mentee participation by 30%** through building strong rapport and fostering engagement.
- **Led/co-facilitated 10+ workshops and study groups**, enhancing peer understanding of computing concepts.
- **Collaborated with 10+ mentors** to maintain consistent communication and ensured 100% accuracy in reporting.

Gaming Attendant / Bartender

Deer Park Club, Deer Park

January 2023 - February 2025

- **Handled \$5,000+ in daily transactions** with 100% accuracy and compliance.

- **Served 100+ patrons per shift**, ensuring high satisfaction through prompt and friendly service.
- **Oversaw 30+ gaming machines and 6 TAB terminals**, ensuring full compliance with RSA, RSG, and TAB procedures.
- **Resolved 10+ incidents discreetly**, maintaining a safe and welcoming gaming environment.
- **Trained 4 new team members**, improving onboarding efficiency and service consistency.

Education

RMIT University at Melbourne, Victoria

Bachelors in Computer Science Expected in December 2026

RMIT University at Melbourne, Victoria

Associate degree in Information Technology December 2022

References

References available upon request