Fardeen Rahman

fardeenrahman.com

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EDUCATION

- **Adelaide University** — Adelaide, SA
  Bachelor of Science in Computer Science — GPA: 6.10/7.00 — *March. 2024 – Present*

- **Glenunga International High School** — Glenunga, SA
  ATAR of 97.80/99.95 — *Feb. 2018 – Dec. 2023*

EXPERIENCE

- **Australian Institute of Machine Learning** — Adelaide, SA
  FPGA Research Assistant Internship — *Nov. 2025 – Present*
  - **LiteX**: Used LiteX to test and create FPGA Cores/System-on-Chips to explore various digital design architectures and create full FPGA-based systems.
  - **RISC-V Strucutre**: RISC-V is an open standard instruction architecture that I researched and tested under the supervision of Dr Bradley Morgan. We explored the acceleration of this platform's hardware using quantum resilient algorithms, also known as quantum cryptography.
  - **Kyber ISE**: Designed and implemented a unique CPU core, using the LiteX framework and HDL (Verilog/VHDL), integrating an open-source RISC-V core and developing a memory-mapped bus structure. Eventually, I integrated custom hardware acceleration blocks to test.

- **Realty1Global** — Adelaide, SA
  Full Stack Developer — *Aug 2025 – Present*
  - **Next.js with React and API integration**: Developed a full-stack short-term rental platform using Next.js, React, and Tailwind CSS, implementing secure booking workflows and integrating Stripe for end-to-end payment processing.

VOLUNTEERING

- **Adelaide University Computer Science Club** — Adelaide, SA
  Social Media and Design Officer — *Oct. 2025 - Present*
  Open Source Team — *Oct. 2024 - Oct. 2025*

- **Adelaide University Space Society** — Adelaide, SA
  Marketing and Design Officer — *Nov. 2025 - Present*
  Open Source Manager — *Nov. 2025 - Present*

AWARDS AND ACHIEVEMENTS

- **Jane Street Estimathon Winner** — Adelaide, SA
  Won in a group of five — *Sept. 2024*
  - **Winner**: Employed several techniques, such as Fermi Estimation and logical reasoning, to achieve the highest point total of the pool of competitors.

- **Adelaide University Principals Scholarship** — Adelaide, SA
  Recommended for academic excellence — *March. 2024*

PROJECTS

- **Basys 2 VGA Controller**: Engineered and implemented a custom 640x480 VGA Controller and Pong entirely within the Basys 2 FPGA (Spartan-3E), demonstrating high-speed digital system design. Designed critical clock division and synchronization logic to derive the necessary pixel clock and generate precise Horizontal and Vertical Sync (HSync/VSync) signals required for the 60 Hz video standard.

- **fardeenrahman.com**: My personal portfolio website developed using Astro, Tailwind CSS and Typescript. Integrated content management system for easy modular editing over my career. Deployed using Vercel.

- **Adelaide University Space Society Website**: Developed an open-source website in Vercel with Next.js and React, with end-to-end Stripe payment integration. Used calendar library with React to show event schedules as well as a content management system so admin members do not have to hard-code changes.

PROGRAMMING SKILLS

- **Languages**: Verilog, VHDL, Python, Javascript, C++, C, SQL, Typescript, Astro, HTML, Java, Assembly

- **Technologies**: Physical FPGAs, LiteX, AWS, React, Vue, Google API