Rudy Castan

Singapore · rudyandboyoung@gmail.com · linkedin.com/in/rudycastan

Summary

Computer science lecturer since 2017 and former professional game programmer, who teaches programming by having students make things they can see and play: drawings, animations and team-built games.

- Designed and taught a five-day p5.js game-programming workshop for high-school students (DigiPen–KMU summer workshops, 2021): students learned variables, conditionals, loops, functions and particles, pitched their own game on day 4 and presented it on day 5; ten student games are published on the workshop site.
- Helped teach team game-project courses at DigiPen–KMU and now teaches team game and software project courses at DigiPen Singapore (2026), in which mixed teams pitch, build, test with structured peer feedback (playtesting), and present a finished product against fixed milestones.

Experience

Senior Lecturer, DigiPen Institute of Technology Singapore · January 2026 – present · Singapore

- Teaches Introduction to Computer Graphics, Modern C++ Design Patterns and Operating Systems in Bachelor of Science (BSc) Computer Science programmes, and Modern C++ Design Patterns for the Bachelor of Engineering (BEng) in Mechatronics Systems.
- In those courses, teams of about six computer science students work with user experience (UX) design and fine-arts students to build mobile products; writes each team's milestone goals.
- Co-designed and co-taught, with one other instructor, Day 4 of a five-week, 14-session AI Application Development Bootcamp for graduates, in two tracks: one for students with a computer science background and one for students who only script.
- Wrote and presented "Vibe Coding: Build Tools for Your Work", a 90-minute workshop for staff from computer science, design, HR and administration, designed so that non-programmers succeed.
- Faculty supervisor for the Integrated Work Study Programme (IWSP) run with the Singapore Institute of Technology (SIT): reviews student logs every two weeks and meets each student monthly.
- Co-runs a faculty upskilling programme in which cross-discipline teams of three roles build a mobile app over 13–14 weeks.

Lecturer, DigiPen–KMU Special Program, Keimyung University · June 2017 – December 2025 · Daegu, Korea

- Taught every first- and second-year computer science course of the BS in Computer Science in Real-Time Interactive Simulation (RTIS): programming in C, C++ and advanced C/C++, computer architecture and assembly, operating systems, 2D and 3D computer graphics, game engine architecture, and data structures.
- Taught Introduction to Programming (JavaScript and p5.js) for university students new to coding: about 36 short daily exercises, eight assignments such as Conway's Game of Life, and a final game made to a set theme with a written game design document.
- Wrote doodle, a C++ drawing library modelled on p5.js, so first-year students could make visual programs from their first week; used in the first C/C++ course and the introductory game-project courses.

- Hosted three themed game jams for students (2024–2025) and published the games online; joined two of them as a family team with Shinyu and Hayu, now OWIS students.
- Built automatic graders and quiz-question generators (Moodle Virtual Programming Lab, Python) so students received immediate feedback on exercises.

Senior Engineer, then Contract Game Programmer, MunkyFun · September 2013 – March 2017 · San Francisco Bay Area, then remote from the Greater Seattle Area

- Platform and tools engineer for a cross-platform game engine (Android, iOS, Windows) and its automated build system, which checked errors, assets and configuration and numbered versions and release notes.
- Shipped *League of War* and *League of War: Mercenaries*, *Knight Storm*, *Bounty Bots*, *My Horse*, *Ivory Tiles*, *Shift*, *Psych!* and *Crystal Chimes* (iOS, several also on Android; 2013–2017).

Game Engineer, PlayFirst · August 2012 – August 2013 · San Francisco Bay Area

- Lead engineer for the iOS game *Diner Dash Rush*: requirements, maintenance, and game features driven by data that could be changed remotely.

Gameplay Programmer, Bigpoint GmbH · January 2011 – April 2012 · San Francisco Bay Area

- Built the quest, conversation, achievement and level-scripting systems, three game modes, and design and debugging tools for *The Mummy Online*, a browser action role-playing game made in Unity3D.

DSi Contract Programmer, BrandX Games · September 2009 – January 2010 · Greater Seattle Area

- Built the company's first Nintendo DSi game demo alone: a component-based C++ engine for a real-time strategy game with sprite animation, scrolling backgrounds, pathfinding and audio.

Projects

- **AI for learning resource kit (2026)**: a student guide to using AI well, a set of prompts for using AI as a tutor rather than to do the work, and settings that make AI coding assistants act as tutors.
- **Student work, DigiPen (2005–2008)**: designer of *The Iron Project*, a 2D strategy game; AI, sound and music for *Haxsys 2.0*, an eight-player networked game; a C++ ray tracer.

Education

Bachelor of Science (BS), Real-Time Interactive Simulation, DigiPen Institute of Technology · 2005–2008

Green River Community College · 2004–2005

Skills

- Teaching: introductory and advanced university programming courses, a game-programming workshop for high-school students, team project courses with milestones and peer feedback, workshops for non-programmers, automatic grading and quiz generation.
- Programming languages: C, C++, JavaScript with p5.js, Python, C# and Lua.
- Graphics and games: OpenGL, SDL, Unity3D, DirectX, game AI, iOS and Android games.
- Tools: Git and GitHub, CMake, Jenkins, Moodle, and AI coding assistants (Claude Code, GitHub Copilot).
- Languages: English; Korean (elementary).