

RYAN ALMENDRA SABARRE

Senior Software Engineer | Retail POS & Self Checkout | Payments & Hardware Integration | Agentic AI Workflows

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PROFESSIONAL PROFILE

Senior Software Engineer with 20+ years of experience designing, building and supporting production software across retail POS, self checkout, payments, hardware integration, automation engineering, mobile apps and web platforms. Proven ability to turn complex store operations into reliable software used in live retail environments. Recent work includes next-generation self checkout for Ritchies Supermarket and Spotlight, Flybuys rewards integration for Coles, and agentic AI engineering workflows using Claude CLI, Codex, Claude Skills and structured LLM practices.

20+ years	130+	30+	5 countries
Software engineering	Engineers led at NCR	Android apps published	Global delivery exposure

CORE EXPERTISE

• Retail POS, BOS, HOS and self checkout platform design, development and production support • Hardware integration: scanners, scanner scales, bag scales, printers, cash drawers, customer displays, Zebra, NCR, Magellan and Glory recycler devices • AI-assisted and agentic engineering using Claude CLI, Codex, Claude Skills, prompt engineering, structured agents, code investigation and review workflows • Automation engineering: robotics, motion control, machine vision, GPIB, USB, serial, DAQ and pneumatic I/O triggering	• EFTPOS and payment integrations: Linkly/PCEFTPOS, MX51, Afterpay, Openpay, ZIPPAY, EPay and EPay Wallet • API and services development using REST, JSON, HTTP services, file transfer tools and integration libraries • Delphi, C/C++, C#, Unity, Java/Android, PHP, JavaScript, SQL Server, MySQL, SQLite, Crystal Reports and Report Builder • Leadership, mentoring, Jira, Autotask, GitHub, Git workflows, SDLC, testing, documentation and production troubleshooting
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LATEST AI AND AGENTIC ENGINEERING EXPERIENCE

- Built practical AI-assisted development workflows using Claude CLI, Codex and LLMs for codebase investigation, debugging, refactoring, documentation and review preparation.
- Created structured agent workflows that separate investigation, planning, patching, review and test-thinking responsibilities so only controlled changes move forward.
- Created Claude Skills and reusable project instructions to standardise coding rules, regression checks, patch discipline, documentation quality and production-safety expectations.
- Designed an agentic command-control workflow concept where Jira/email intake can trigger investigation-only, acceptance-test or full-stack fix flows, then return confirmation status for human approval.
- Applied AI to accelerate work while preserving engineering judgement: source control review, confirmation gates, incremental patches and production issue discipline remain mandatory.

PROFESSIONAL EXPERIENCE

Surefire Systems www.surefiresystems.com <i>Senior Software Engineer / Lead Software Developer</i>	5 Apr 2012 - Present
• Designed, developed and supported next-generation self checkout software used by Ritchies Supermarket and Spotlight, covering customer journey, transaction flow, attendant functions, POS communication and production support. • Implemented Flybuys rewards integration for Coles, including POS loyalty workflow changes, reward handling, API integration, testing and support. • Implemented EFTPOS integrations with Linkly/PCEFTPOS and MX51, including terminal communication, cloud payment flows and production troubleshooting. • Integrated retail hardware including EFTPOS terminals, scanners, scanner scales, bag scales, printers, cash drawers, customer displays, Zebra devices, NCR devices and Magellan devices. • Implemented API integrations for Afterpay, Openpay, ZIPPAY, EPay, EPay Wallet, NCR LPE and SmartConnect TCC discounting. • Designed POS HTTP services, file-transfer tools, REST-based customer record transfer tools and supporting libraries for store systems. • Applied Codex, Claude CLI, Claude Skills and agentic AI workflows to improve investigation speed, code analysis, refactoring discipline, documentation and review preparation. • Troubleshoot and supported high-priority production issues across POS, BOS, HOS and self checkout systems using Jira, Autotask, GitHub and Git workflows. • Created and updated SQL Server stored procedures, Crystal Reports and Report Builder reports for POS and back-office business logic.	
Blastmaster www.blastmaster.com.au <i>Software Developer / IT Administrator</i>	29 Nov 2010 - 5 Apr 2012

- Started the in-house IT department and introduced practical software tools, computer strategies and IT policies.
- Designed and developed networking tools including internet reservation, VPN connection and server health-check systems.
- Built the Blastmaster IT Helpdesk Server and Client, CRM reports, NUBuilder UI features, report queries and back-end MySQL management systems.
- Supported more than 70 staff across IT concerns, application support, web changes, network administration, DNS, Active Directory, DHCP, GPO and Exchange.

Finisar Corporation | www.finisar.com

3 Mar 2008 - 18 Oct 2010

Manager 1 / Senior Software Development Engineer

- Designed automation software for robotic arm control, pick-and-place operations, laser alignment, precise positioning and manufacturing workflows.
- Developed image-recognition algorithms for laser light, particles, edges and image movement using machine vision concepts.
- Integrated software with I/O controls, pneumatic triggering, power meters, laser drivers, power supplies, GPIB, serial and USB instruments.
- Designed automation framework architecture, coding standards, design documentation and database structures for manufacturing software.

NCR Corporation | www.ncr.com

18 Sep 2002 - 19 Mar 2008

Department Software Manager / Software Engineering Team Leader

- Managed and grew the Fastlane software department to 134 engineers while maintaining low attrition and transferring project ownership from Atlanta to Cebu.
- Led teams across software engineering, systems engineering, testing and web development while enforcing standards, controls and delivery processes.
- Maintained and developed Visual C++ libraries that communicate with Fastlane self checkout hardware and supported automation test script development.
- Designed internal reservation and time-management systems with SQL Server support and helped build local engineering capability.

Japan Media Programming (JAMP) | www.booom.com

Dec 1998 - Dec 1999; Oct 2001 - Aug 2002

Web Developer / Multimedia Programmer

- Developed web-based tutorials, multimedia learning systems, online games, Sanrio media content, installers and payroll systems using web technologies and Delphi.

ACER Corporation | www.acer.com

21 Oct 1999 - 21 Oct 2001

Product Repair Engineer

- Troubleshoot laptop and PC defects, resolved recurring pilot-run and mass-production issues, and trained repair engineers on soldering and repair methods.

FOUNDER PROJECTS AND MOBILE APPS

- Founder of YourELink Inc. and publisher of 30+ Android apps and games on Google Play, including budgeting, reminders, image tools, casual games and utility apps.
- Developed mobile games with Unity and Android/Java, including current AI-assisted game development workflows using structured agents, code review rules and patch discipline.
- Built freelance systems including electronic medical records, restaurant POS, accounting, payroll and meal subsidy solutions using Delphi and database technologies.

EDUCATION AND TRAINING

- Bachelor of Computer Science - University of San Carlos, Cebu, Philippines (Graduated March 1997)
- Automation Programming Training - Silicon Valley, USA (2008)
- WinRunner Automation Test Script Writing - Atlanta, Georgia, USA (2002)
- NCR management, performance management, leadership and C++ training programs

References available upon request.