

# John Poncini

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## Professional Summary

Results-driven Senior Software Engineer with 8+ years of experience building full-stack, security-focused clinical software systems used in high-stakes medical trials. Proven leadership in developing scalable, HIPAA-compliant applications and delivering complex products under rapid iteration cycles. Adept at collaborating across clinical, compliance, and technical teams to deliver user-centric solutions that improve clinical workflows, data integrity, and regulatory outcomes.

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## Technical Skills

- **Languages & Frameworks:** C++, Python, Flask, JavaScript, React, Bash, TypeScript, C#
  - **Cloud & DevOps:** AWS (S3, Lambda, IAM), GitHub Actions, Docker, Terraform, CI/CD pipelines
  - **Security & Compliance:** HIPAA, 21 CFR Part 11, GDPR, GxP, PGP/RSA, AES, SSO/OAuth2
  - **Databases:** PostgreSQL, MySQL, DynamoDB
  - **Tools:** FFmpeg, Jira, SharePoint, Zoom, Selenium, Stripe, Salesforce
  - **Testing & QA:** Automated testing, integration testing, code review best practices
  - **Documentation & Process:** SOPs, API references, runbooks, onboarding guides
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## Professional Experience

### Arc Biosciences — Founder & Principal Engineer

March 2017 – Present

- Developed and deployed a HIPAA-compliant, full-stack clinical video recording system used in 20+ sites for Phase 3 trials; increased data throughput 5x and reduced user-reported issues by 80%.
- Designed a modular DNA library synthesis platform combining Gibson-style assembly with self-splicing intronic linkers, enabling seamless high-fidelity generation of large combinatorial gene libraries.
- Conducted in silico analysis of codon redundancy patterns and their influence on protein yield, stability, and host compatibility.
- Built internal tools to accelerate DNA fragment design and simulation workflows; led cross-functional collaboration with wet lab partners.
- Authored whitepapers, technical briefs, and SOPs for synthetic library design and AI-assisted sequence generation.
- Mentored clinicians and coordinators on secure system usage; led cross-site training programs and created knowledge base documentation.

**MAPS — Associate Director of Technology | Product Manager | Senior Software Engineer**  
*April 2020 – January 2024*

- Directed enterprise technology across compliance, internal platforms, and digital tools supporting clinical operations and donor engagement.
- Architected and launched the MAPS Education Portal and in-house OAuth system for unified user identity across platforms.
- Spearheaded a secure overhaul of Exchange/O365 and managed compliance platforms (SharePoint, Zoom, Addigy MDM).
- Led crypto donation platform launch with Gemini, supporting NFT fundraising with institutional-grade controls.
- Oversaw end-to-end development of a Flask/Stripe donation platform; deployed to AWS Lambda with webhook listeners and Salesforce integration. Increased MRR by 70% and decreased fraud incidents by 95%.
- Conducted code reviews, enforced QA standards, and implemented CI/CD pipelines using GitHub Actions.
- Created API documentation, technical onboarding guides, and system SOPs; conducted internal stakeholder demos and training.

**Lykos Therapeutics — Video & Informatics Systems Associate**  
*May 2018 – April 2020*

- Engineered a touchscreen-based clinical video capture device with Linux OS; cut hardware costs by 30% and support tickets by 50%.
- Administered encrypted media workflows with custom HLS delivery pipelines and PGP-based access control.
- Appointed Data Security Officer; authored security SOPs and oversaw GDPR implementation across clinical systems.
- Led technical hiring for IT department; established foundational processes for onboarding, compliance, and infrastructure.
- Created runbooks, internal wikis, and training materials for clinicians and technical support staff.

**MAPS PBC — Clinical Video Intern**  
*July 2016 – March 2017*

- Built automated Bash/Python tool to reconcile missing video records across clinical trial data storage, reducing manual workload by 90%.
- Managed encrypted data transfers to AWS S3 using Snowball and CLI tools.
- Authored technical protocols aligned with HIPAA, 21 CFR Part 11, and GxP.

**Learning Support Services, UCSC — STEM Tutor (Python, ODEs, Organic Chem)**  
*2014 – 2015*

- Delivered one-on-one and group tutoring; improved student outcomes via adaptive problem-solving instruction.
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## Education

**B.S. Biomolecular Engineering**  
University of California, Santa Cruz  
*2012 – 2016*

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