

# Luke Ponssen

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## EDUCATION

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### B.S. Computer Science and Engineering

Santa Clara University Honors Program | Yonsei University (Aug 2024—Dec 2024)

Expected Jun 2026

GPA: 3.9

Courses: Compilers, Networks, Operating Systems, Theory of Algorithms, Computer Architecture, Probability & Stats, Differential Equations, Discrete Math, Linear Algebra, Embedded Systems, Electric Circuits, Digital IC Design

## PROFESSIONAL EXPERIENCE

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### Software Engineering Intern

Jun 2025—Aug 2025

Mirror (W25) | San Francisco, CA

- Built [digital clones](#) by orchestrating 3 Mastra agents equipped with 12 Composio tools & Exa via MCP for search
- Safeguarded 20GB of anonymized user data with Stripe for payments, OAuth, and AES-256-GCM encryption
- Powered ZeroEntropy semantic search with vector database of 200,000+ Google, Atlassian, Slack embeddings
- Shipped in 1 week a full-stack Electron app (React, Node.js, Supabase, Fly.io) scaled to 100+ users on launch day

### Software Engineering Intern

Jun 2024—Aug 2024

BillionToOne | Menlo Park, CA

- Developed a customized AI assistant chatbot by streamlining OpenAI API calls to Slack Bolt App API endpoints
- Designed 6 custom features and 100+ use cases for Quality Assurance, Bioinformatics, and People Ops teams
- Reduced AI assistant response time by 61.3%, added multimodal support for 12 file types with LlamaParse API
- Streamlined deployment, enhanced scalability & increased containerization with Docker, Terraform, and AWS

### Full-Stack Engineering Intern

Jul 2023—Sep 2023

AIMS Team | Fremont, CA

- 300+ hrs of experience engineering full-stack solutions for mobile/web apps for 20 water/wastewater districts
- Manipulate 2TB of data from clients in SQL and connect it to web applications using C#, JS, HTML, and ASP.NET
- Engineer 3 mobile apps for clients using ArcGIS Online and REST API Service to automate data updates/queries

### VR Software Engineer

Jan 2023—Aug 2024

Human-Computer Interaction Lab at Santa Clara University | Santa Clara, CA

- Create a [digital twin](#) of university dorms in VR, adapt website with hyper-attentiveness to user feedback on UI
- Implement Matterport SDK with Javascript to make 10 3D virtual scans of dorms accessible to touring students
- Presented our VR project to the Matterport Executive Board, establishing/bridging their relationship with SCU

## RESEARCH EXPERIENCE

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### Machine Learning Researcher

May 2020—Nov 2021

Aspiring Scholars Directed Research Program | Fremont, CA

- Constructed SVM, Random Forest, Decision Tree models with libraries tensorflow, keras, sklearn, numpy
- Increased Multilayer Perceptron accuracy by 15% by applying dimensionality reduction on 531,468 data points
- Presented at Southern California Conference Undergraduate Research 2021 (hosted 700+ participants online)
- [Publication](#): Ponssen, Luke, et al. "Using Classification Models to Analyze Bellwether Counties in U.S. Presidential Elections." *Seriatim Journal of American Politics*, vol. 3, no. 2, 2021, pp. 8-21.

## PROJECTS & SKILLS

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- [Custom CPU](#): Built & verified a pipelined CPU for custom ISA in Verilog/Vivado with a comprehensive testbench
- [ZeroNic](#) | [Demo](#): Designed vape pen for quitting nicotine, led UX research with 5 vapers and 10+ usability tests
- [Google Calendar Wrapped](#): Programmed a data visualization tool similar to Spotify Wrapped's data breakdown
- [Bronco Salt & Pepper Shakers](#): Designed in SolidWorks and 3D printed 40 shakers over 250+ hours with Prusa
- Skills: Python, Java, SQL, JS, HTML, CSS, C++, C | Git, Linux, ArcGIS, Docker, Agile/Scrum, AWS, Figma, ARM, RISC

## AWARDS & DISTINCTIONS

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- Tau Beta Pi | Top 30 students selected from the School of Engineering for outstanding academic achievement
- INRIX Hackathon 2023 | 1st Place (43 teams, 304 participants) | [Devpost](#) | [GitHub](#)
- Santa Clara University 2023 Maker Product Design Challenge | 2nd Place (\$1500) | [Website](#)