

Luke Ponssen

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EDUCATION

B.S. Computer Science and Engineering

Sep 2022—Present

Santa Clara University Honors Program | Santa Clara, CA

GPA: 3.9

Relevant Coursework: Theory of Algorithms, Abstract Data Types & Structures, Object-Oriented Programming & Advanced Data Structures, Embedded Systems, Calculus III-IV, Discrete Math, Differential Equations, Linear Algebra

PROFESSIONAL EXPERIENCE

Full-Stack Engineer

Jul 2023—Sep 2023

AIMS Team, LLC | Fremont, CA

- 300+ hrs of experience engineering full-stack solutions for mobile/web apps for 20 water/wastewater districts
- Import 1,000,000+ assets and their features using SQL and create spatial relationships using ArcGIS Maps SDK
- 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

RESEARCH EXPERIENCE

VR Software Engineer

Jan 2023—Present

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
- Contribute original ideas and research in weekly 3 hour meetings and guide our work using Agile methodology
- Presented our VR project to the Matterport Executive Board, establishing/bridging their relationship with SCU

Misinformation Researcher

Jun 2023—Oct 2023

Santa Clara University | Santa Clara, CA

- Scrape Twitter for 2000 tweets regarding controversial topics that potentially have misinformation or trolling
- Construct training datasets for ML models by labeling over 2000 tweets as misinformation, trolling, or both
- Use constructive feedback from Dr. Liu and Dr. Jazaieri to efficiently build API calls for relevant Twitter content
- Present weekly project progression and new obstacles, update codebook with 20+ specific rules and examples

Machine Learning Researcher

May 2020—Nov 2021

Aspiring Scholars Directed Research Program | Fremont, CA

- Compiled, organized, and processed 531,468 county-level demographic, economic, and education data points
- Constructed SVM, Random Forest, Decision Tree models with libraries tensorflow, keras, sklearn, numpy
- Increased Multilayer Perceptron classifier accuracy 15% by effectively utilizing industry feedback from Dr. Mui
- Presented the implications of statistically outstanding bellwether attributes at Southern California Conference for Undergraduate Research (SCCUR) 2021 which hosted over 700 online participants
- [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

- [Website Portfolio](#): I learned in 4 days through trial & error how to use HTML, React JS, and CSS to customize the UI/UX, animate typed prompts, create templates and navigation bar, and automate website workflows/updates
- [Bronco Salt & Pepper Shakers](#): Designed hugging bronco salt & pepper shakers using SolidWorks CAD software and 3D printed 40 shakers over 250+ hours using Prusa and Ultimaker, laser cut acrylic sliders for the bottoms

SKILLS

- Coding Languages: Python (4yr), Java (2yr), SQL (1yr), JS (1yr), HTML & CSS (1yr), C++ (<1yr), C & C# (<1yr)
- Spoken Languages: English (Native), Spanish (Advanced) | Spanish Immersion Program (K-8) and AP Spanish
- Skills: Git, Linux CLI, Intellectually Curious, Problem-Solver, Innovative, Adaptable, Strong Communication Skills

AWARDS AND DISTINCTIONS

- INRIX Hackathon 2023 | 1st Place (43 teams, 304 participants) | [Devpost](#) | [GitHub](#)
- Santa Clara University 2023 Maker Product Design Challenge | 2nd Place (\$1500) | [Website](#)