ALEX JONES

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Publications

Jones, A. & Nelson, G. (2023). "A Constructionist Learning Environment for Accessible Agricultural Robotics in Rural Communities via Making and Remixing." Fablearn / Constructionism Conference, New York, New York.

Experience

Graduate Research Fellow   **September 2023 - Present**
National Science Foundation   **Orono, Maine**
- Graduate research at the intersection of spatial computing and maker education
- Focus on equitable STEM learning environments for underprivileged communities

Founder, CEO   **April 2019 - September 2023**
Farmhand Automation   **Biddeford, Maine**
- Designed and built three iterations of low-cost autonomous robotics platform for sustainable farming
- Developed horizontally scaled digital manufacturing workflow and design studio including 3DP and CNC
- Design and technical lead on mechanical, electrical, robotic software, and mobile application
- Developed modular web-service robotics framework using docker, redis, flask, python, and websockets.
- Led and coached team of five novice engineers during the pandemic across mechanical, electrical, and software
- Raised over $800,000 in private investment, state, and federal grant funding

Director, Customer Engagement   **May 2018 - March 2019**
iUNU Inc. www.lunapowered.com   **Seattle, Washington**
- Primary focus to hold company accountable to customers in fast paced high-tech environment
- Led deployment of robotic system to agricultural customers across 4 US states and Canada
- Built monitoring software used company wide for hardware uptime to drive results measurement
- Revitalized cold sales prospects with scaleable pilot initiatives that led to new sales
- Developed SOP's, metrics and KPI's for customer success, onboarding and sales engineering

Principal Product Manager   **July 2017 - May 2018**
iUNU Inc. www.lunapowered.com   **Seattle, Washington**
- Empowered engineers and designers to own their work and make great product decisions for scale
- Agile product owner for company of 30 across web, robotics and computer vision teams
- Led systems design on robotic inventory management system and mobile web application
- Delivered first robotic fleet deployment, bug-fixes, and onboarding with customers
- Conducted business analysis, value and process mapping, for greenhouse horticulture market 5-20+ acre size

Emerging Technologies Advisor   **April 2017- March 2019**
Western Growers Association www.wginnovation.com/   **Salinas, California**
- Consultant with the leadership of the Western Growers Association to identify agricultural technology trends
- Research and survey new technology companies entering the market approaching the agricultural community
- Acting liaison for startups in San Francisco to the Salinas Valley agricultural hub

Product Manager   January 2016 - February 2017
Forager LLC   www.goforager.com   **Portland, Maine**
- Designed ecommerce platform for local food featuring product search, order, digital invoicing and ACH payments
- Executed 6 month private beta, $350K in local food transactions and 1,000+ orders across 2 grocers and 30 farms
- Converted 90% of offline transactions to online orders and on-average increased farmer revenue by 10%
- Product owner with agile team including 5 remote developers for 4 month build, $50K under budget
- Managed 4 live product releases during the 6 month pilot with rapid bi-weekly customer feedback sessions
- Collaborated with local bank to design custom ACH integration reducing fees from 80 basis pts to 0.01 basis pts

User Experience Strategist (Consultant)   October 2015 - December 2015
Forager LLC   www.goforager.com   **Portland, Maine**
- Conducted interviews across 20 users including various buyer and seller archetypes
- Conducted industry market research generating financial models favoring grocery market over other retailers
- Redefined strategy to focus on large wholesale grocers increasing revenue to acquisition cost by 500%
- Overhauled original iOS concept and wireframed new desktop enterprise web solution
- Created mockups leading to beta customer commitment by key grocers and network of dozens of local farmers
- Work led to help close $875k in seed round and became first hire as product manager

Product Research and Design   September 2013 - December 2015
Bee Informed Partnership   www.beeinformed.org   **University of Maryland, College Park**
- Responsible for identifying new digital services to generate revenue for honey bee research initiatives
- Implemented human centered design principles and conducted 12 surveys across sample of 1,000 users
- Analyzed data using quantitative analysis including rank order, open text word frequency and A/B testing
- Designed crowdsourcing platform delivering bi-weekly best practices advices to beekeepers for 12 month beta
- Platform held 80% retention rate, 40% user increase and 20% conversion to paid memberships

Founder and CEO   September 2012 - January 2016
Apiara Hive Technologies   **Portland, Maine**
- Prototyped and produced first sub $1,000 IoT device to monitor honey bee health and performance for $199
- Raised $100k in state R&D grant funding and committed presales of over 100 units of product
- Conducted quantitative market study, in person user interviews and remote user interviews
- Managed component supply chain and sourcing direct from 8 Chinese manufacturers for assembly in U.S.

Technical Skills

Web: React, Docker, Flask, FastAPI, Redis, NoSQL, WebGL, Babylon.js, Python, Javascript, Typescript
Embedded: C++, Arduino, RPI, Performance Testing, Comms Bus Protocols (I2C, Serial, SPI, CAN)
Mechanical: Fusion 360 CAD/CAM, CNC Machining, Large Format 3D Printing (FDM), Thermal and Load Analysis
Electrical: Microcontroller Circuit Design, Sensor Integration, Power Banks, Monitoring, Brushless Motor Control

Education

PhD, Spatial Information and Engineering   **2023 - Present**
University of Maine   **Orono, Maine**

Bachelor of Arts, Film and New Media   **2003 - 2007**
Emerson College   **Boston, Massachusetts**

Professional Summary

Versatile and innovative collaborator with a comprehensive background in design of robotic systems including mechanical, electrical, and software engineering, now channeling expertise into the academic realm. With over a decade in technology and sustainable agriculture innovation, my career evolution has brought me from developing IoT devices and advanced robotics to spearheading academic research in immersive XR technologies and virtual makerspaces. As a recent graduate student and an emerging researcher, my focus is on bridging the gap in STEM education through innovative, accessible technologies.