

# KARINA SOTOLONGO

## B.S. Human Factors Engineer, M.S. User Experience

Melbourne, FL | (772) 224-5126 | karinasotolongo@gmail.com | U.S.Citizen | Eligible for Security Clearance

### Summary

HumanFactors and Systems Engineering professional with expertise applying **MIL-STD-1472** and human-systems integration (HSI) principles to optimize usability, safety, and mission performance. Skilled in UX research, data analytics, and system design, translating user needs and quantitative data into operational requirements and engineering solutions. Strong background in cross-functional collaboration, human-in-the-loop testing, and data-driven decision making. Proficient in **Python, SPSS, R, C++ Figma**, and Rhino 3D.

### TECHNICAL SKILLS

**Human Factors & UX:** MIL-STD-1472, with focuses in crowd control, task analysis, usability testing, heuristic evaluation, cognitive workload, assessment systems and engineering. Proficient in Requirements analysis, human-in-the-loop design, system modeling, prototyping, A/B testing

**Programming, Data & Analytics:** Python, C++, R SPSS, Power BI, Google Analytics, statistical modeling, data visualization.

**Design & Prototyping:** Figma, Rhino 3D, 3DS Max, Balsamiq, Adobe XD, Adobe Creative Suite

**Tools & Platforms:** Asana, Workday, Microsoft Office Suite **Soft Skills:** Technical communication, SharePoint, instruction & training.

### EXPERIENCE

#### 6th Grade STEM Educator | Brevard Public Schools | Brevard County, FL | Jul 2025 – Present

Designed and delivered standards-aligned STEM curriculum integrating human-centered design and ergonomic principles. Applied MIL-STD-1472 guidelines to classroom layout and instructional interfaces, improving accessibility and reducing cognitive load. Employed Python and SPSS to analyze student performance data and refine instructional systems, improving formative-assessment outcomes. Introduced systems-thinking modules that taught real-world applications of human systems engineering concepts.

#### Vice President of Internal Affairs | Delta Sigma Inc. (Remote) | Apr 2024 – Present

Directed organizational strategy and national operations; achieved 26% membership growth through data-driven outreach and process improvement. Implemented feedback analytics and workflow audits to streamline governance, increasing cross-council collaboration efficiency. Produced internal documentation and policy frameworks aligned with human systems integration principles for organizational decision-making. Led executive teams through multi-phase planning cycles and conflict-resolution processes, maintaining transparency and accountability.

#### Supervisor | Starbucks Coffee Company | Port St. Lucie, FL | Feb 2019 – Aug 2023

Managed operations, safety, and workforce training for 15+ team members; led regional onboarding on customer experience and safety protocols. Developed and implemented process improvements that raised customer-satisfaction scores and reduced staffing inefficiencies. Championed human-centered operations design for shift scheduling and workspace layout to improve employee ergonomics and throughout.

### PROJECT EXPERIENCE

#### UniversalOrlandoCrowdControl Optimization

Led A/B usability studies on navigation and signage systems; reduced average queue times by 30%. Delivered recommendations for wayfinding design, staff positioning, and information flow optimization across attraction zones.

#### Secureware: Wearable Mobility Aides

Designed and tested wearable prototypes to reduce repetitive-strain injuries; conducted PRA-compliant surveys and usability tests. Created 3D models (Rhino 3D) and implemented ergonomic design iterations improving comfort and functionality.

#### Barnes & Noble UX Redesign

Conducted heuristic evaluation and moderated usability sessions to identify major navigation bottlenecks. Built interactive Figma prototypes resulting in measurable improvements to checkout flow and conversion rates.

### EDUCATION

**M.S. User Experience** — Arizona State University, May 2025 (GPA: 3.92)

**B.S. Human Systems Engineering (User Experience)** — Arizona State University, May 2024 (GPA: 3.70)

### CERTIFICATIONS & TRAINING

Microsoft Office Specialist (MOS) Certification Applied Human Factors & Ergonomics coursework and MIL-STD-1472 applications| Python| C++| R | Power BI |

**Advanced Workshops:** Usability Testing | Python for Data Analysis | 3D Modeling for Prototyping| Lean Six Sigma Green Belt