Jasmine Florentine

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Mechanical Design Engineer, Author, Illustrator

EDUCATION

MS Mechanical Engineering ..... Massachusetts Institute of Technology
2013 - 2015
Thesis: User Feedback in Design for Emerging Markets: Methods and Influencing Factors

BS Mechanical Engineering..... Massachusetts Institute of Technology
2007 - 2011

WORK EXPERIENCE

STEM & Design Freelance.....
Design Engineer and STEM Writer
October 2020 - Present

Design physical computing and other STEAM-based projects and create step-by-step instructions for kids and educators to introduce the basics of robotics, circuits, and coding

One of two game designers collaborating with the Social Emotional Technology Lab at UC Santa Cruz and the Game Academy to design a STEM-based live action role-playing game to engage girls with STEM; responsible for designing projects using the BBC micro:bit

***Eiratech Robotics,* Dublin** .....
Mechatronics Engineer
October 2019 - October 2020

Worked in a team of three to transition Eiratech robot from prototype to manufacture by preparing CAD models, creating documentation, and designing and carrying out tests

Assisted with concept development, CAD modeling, and research for a new system

***UNIT9,* London** .....
Freelance Design Engineer
February 2019 - March 2020

Responsible for the mechanical design of an EEG system that integrates with a race helmet for measuring driver focus and fatigue (patent pending)

Assisted with agency pitch decks through illustration, storyboarding, creating 3D CAD models and renders, technical research, and copywriting

***FIRST,* New Hampshire** .....
For Inspiration and Recognition of Science and Technology
Nonprofit Organization
Mechanical Engineer & Artist
July 2016 - February 2019

Worked in a small, multidisciplinary team to design themed games for the annual FIRST Robotics Competition, including designing gameplay and story

Designed mechanical structures and components for the game field, from initial concept generation, creating sketches and CAD models, building and testing prototypes, to creating final engineering drawings and sourcing components

Drove the visual design of the game fields to match the annual theme by creating concept art, directing the engineering team's technical implementation of the visual design, and creating all final artwork using a mix of 2D digital art and 3D renderings

The games were viewed internationally at 40+ events, with 90k+ student participating in the competition annually and over 30,000 guests at championship events

***Apple Inc.,* Cupertino** .....
Product Engineer Intern
Summer 2015

Worked on soft good products using CAD and numerical geometric models, as well as creating prototypes, and designing and performing technical tests (cannot disclose details)

PUBLICATIONS & RESEARCH

Hex Allen and the Clanksmiths.....
Author, Project Illustrator
Innovation Press, 2022

Author and project illustrator of a STEM adventure novel for ages 8-12, publication in 2022 by the Innovation Press (initial 2020 publication postponed due to COVID)

Story incorporates STEM concepts and projects into the plot, and includes a chapter with illustrated step-by-step instructions for readers to build the projects themselves

***Ideation Lab,* MIT**.....
MS Thesis, w/ Prof. Maria Yang
Fall 2013 - Spring 2015

Studied user-centered design methods for emerging markets with a focus on India

Created visual guides such as storyboards, concept art, and prototypes as a way to elicit user feedback on novel technologies during interviews and workshops

SKILLS

Visual Design.....Drawing and illustration (digital and traditional), 2D animation; proficient with Adobe Photoshop, Illustrator, After Effects, Affinity Designer and Procreate

Fabrication & Engineering..... Proficient with manual machining tools (mill, lathe, etc.) and rapid prototyping (laser cutting, 3D printing etc.); experienced with CAD Software (Solidworks, Onshape)

Programming.....Some experience with Arduino, Python, Microsoft MakeCode