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Objective:

Product Designer, Internal Tools

Summary

Senior Product Designer and HCI/HMI researcher with over 25 years of history building large, complex interactive experiences based on extensive research for deployment to small focused audiences or to millions of users.

I offer the ability to leverage branded design within the constraints of application development while working directly with diverse and remote teams. I have a background in traditional design with working experience in front-end development, brand strategy and effective HCI methods. I believe in creating elegant interactive experiences by iterating within the limits of a target technology, while at the same time discovering opportunities to create beautiful design around it.

Experience

Senior UX/UI Designer

Locomotion - 4/122 - Present

Leading the visual and interaction design direction for the primary in-cabin driver experience. Researching viable solutions through traditional HCI methods leveraging user journey mapping, fast static wireframes and interactive prototypes. Building solutions close to the source by engineering working examples in C++, blueprints, C#, Vue and Angular.

- Collaborative discovery sessions in Miro & analog methods
- Final product design, prototypes and R/T feedback in Figma
- Unreal Engine for interactive demos built in C++ and blueprints
- QT/PyQt6 prototypes with direct integration with ROS and RViz
- Researched ergonomic studies within VR. Developed in Unity/C#
- Frontend development support in Angular/Tailwind for our Digital Transportation System

Lead Product Designer

Edge Case Research - Pittsburgh, PA. 4/18 – 8/2020

Helping design and engineer advanced analysis tools for autonomous vehicles. Edge Case Research leverages advancements in machine learning, AI and robotic perception to help make these intelligent systems safer and more reliable. Develop primarily in Node, Vue and Mongo. Design in Sketch, Axure and XD. Interface directly with CNN/DNNs like YOLOMask R-CNN. Responsible for engineering usable and collaborative interfaces which expose deep data analytics around how robotic systems see the world. ECR is a spin-off organization from Carnegie Mellon's Field Robotics and the National Robotics Engineering Center.

- Design how perception and ML engineers manage defects found in perception systems.
- Rapid prototype front-end code in Vue and backend code in Node and Express.
- Design new tools which consolidate how autonomous engineers manage the safety case.

Lead Human Robotic Interaction Engineer

Stealth Start-Up - Pittsburgh, PA. 8/2017 – 4/2018

Specialized in designing and programming feature rich onboard touchscreen interfaces for autonomous robotic systems. Engineered a highly responsive and scalable UI framework using a blend of ROSlibjs/ROSbridge, Laravel and HTML5. Was responsible for both UX research and design, UI architecture with direct implementation within ROS controlled subsystems. Company dissolved because of economic uncertainty with China.

- Conducted traditional UX research with Subject Matter Experts (SME).
- Produced interactive simulations for user testing in Flinto, Craft, Sketch and Invision.
- Developed production code with ROSlibjs, HTML5, SASS and Laravel.
- Engineered innovative and easy-to-use interfaces on multiple displays in kiosk mode.

Senior HCI/HMI Specialist / Adjunct Faculty

National Robotics Engineering Center, Carnegie Mellon - Pittsburgh, PA. 4/2017 – Present

Helped robotic engineers and system architects with HCI and UX best practices. Worked with proprietary technology in the domain of machine/adaptive learning under the DoD funded RIOT project and the Army Corps of Engineers Mat Sinking project. Defined interactions around how people will be interacting with passive and intelligent autonomous systems. Concurrently, a Capstone Adjunct Faculty member at Carnegie Mellon co-instructing 30 students in HCI methods and strategy.

- Create UI simulations in Axure, HTML and InVision for user testing.
- Building UI for proprietary robustness testing for ROS systems.
- In process of using Unity for AR/VR for autonomous robotic control.
- Instruct students in real-world prototyping methods.

Senior User Experience Designer & Rapid Prototyper

BNY Mellon - Pittsburgh, PA. 1/2010 – 07/2011 | 1/2013 – 4/2017

Support the rapid prototyping of complex UI scenarios while collaborating in a very agile environment. Helping standardize the UX workflow and the validation process between new feature discoveries to final integration for highly visible financial products. Been a strong evangelist for our internal UX lifecycle along with supporting our global development teams from the UK, San Francisco, India, Boston and New York. I had left BNY Mellon in 2011 to work with a local start-up company. I came back to BNY Mellon in January of 2013.

- Worked closely with executive teams to design and validate rich interactive prototypes for Workbench - a flagship reporting service and a leading reporting solution in FinTech.
- Developed feature rich hand-coded prototypes in HTML, CSS3, jQuery and Angular.
- Programmed a complete RESTful service and CMS for a community driven UI Asset Library in Laravel.
- Collaborated closely with our Managing Director of UX to solve process bottlenecks, budget allocations and resource management challenges as well as help train and mentor junior designers.
- Speak locally at universities and hackathons to help recruit new talent.

Lead UX Architect & Front End Developer

Think Through Learning - Pittsburgh, PA. 8/2011 – 11/2012

Hands-on team lead for a highly innovative distance learning start-up which teaches mathematics to approximately 8 million students around the nation. Led the full re-architecture the UI and also produced front-end code (Slim/Bootstrap/Rails) for the internal CMS, teacher, student and client admin portals as well as the student experience. Worked in tandem with the CTO and CEO and managed teams of design contractors along with the in-house design team. TTM was rated the fastest start-up in Pittsburgh and the winner of the CODiE award for best math product 2013. TTM was sold to Imagine Learning in 2017.

- Led large and complex in-depth discovery and interview sessions with teachers, school admins and students.
- Managed creative teams and development teams through mental models, rapid prototyping and other exercises.
- Led internal brand direction and identity sessions.
- Managed the business requirements, functional specs, sitemaps and wireframes for final integration hand-off.
- Fully integrated front-end developer collaborating directly with the CTO and back end teams.

Interaction Designer

Hollywood Media Corporation - Boca Raton, FL. 05/2004 – 05/2006

Integral in the formation and direction of the new Hollywood.com website redesign. Responsible for designing easy to use and functional web interfaces based on internal and external user testing and human factor heuristics. Developed navigation flowcharts, wireframes and interactive HTML/Flash prototypes to support these goals. Collaborated directly with both the Executive Producer and the Vice President during development of Hollywood.com and eGuide.com. Worked within the Information Architecture department in tandem with .NET developers throughout the process.

- Implemented and refined final HTML and CSS into completed .NET web applications.
- Managed multiple user tests with the Nielsen Norman Group, further refining our design and content.
- Created site architectures, database driven workflows and wireframes for eGuide.com and Hollywood.com.
- Worked directly with the content and marketing departments to better implement their goals.
- Supervised the Senior Designer in creating style guides and layout to support our industry branding.
- Managed editorial and graphical assets within the proprietary content management system.
- Developed multiple specification documents outlining process and requirements.

Lead Visual Designer

STUDIO for Creative Inquiry, Carnegie Mellon Robotics Institute. - Pittsburgh, PA. 03/2001 – 02/2004

Instrumental in designing the 3D user experience framework for a distance learning and training application that utilizes NASA mission data from the Mars Global Surveyor, Viking and Odyssey datasets in preparation for the 2004 MER Mars mission. Worked closely with programmers, educators, and robotic scientists to design a 3D interactive environment for an innovative 'telepresence' interface. This application provided new opportunities for both students and scientists to look for evidence of life within an interactive 3D game-like world. Work is currently on display as an interactive exhibit at the Adler Planetarium in Chicago. Also developed the VHF communication systems onboard field robots using ham radio.

- Innovated new forms of 3D spatial navigation systems based on autonomous robotic systems.
- Developed user interaction models derived from engineering specification documents.
- Implemented final interactive experiences based on extensive user testing with hundreds of students.

- Edited broadcast quality video shorts for use in public relations and future funding opportunities in Adobe Premiere.
- Integrated the public outreach gateway for Carnegie Mellon Field Robotics using a blend of Flash and traditional HTML.

Creator/Owner of EZlens.com

EZlens.com - Pittsburgh, PA (11/1998 – 1/2002)

EZlens.com was a consumer focused discount contact lens eCommerce company. Over a 4 year period we sold over half a million lenses worldwide. It started at a kitchen table and grew to about 10 employees.

- Implemented the front-end and the back-end shopping cart systems.
- Marketed the site extensively and maintained a strong customer service commitment.
- Personally fulfilled hundreds of orders every week through our supplier.
- Managed and maintained all server and front-end administration.

Interface Designer

The 3DO Company - Redwood City, CA (09/1995 – 11/1998)

Responsible for the creating graphical user interfaces from storyboard to final integration. Primarily designed menu system metaphors for the video game High Heat Baseball '99. Gaming platforms included Playstation, Sega, the 3DO Multiplayer and the PC. HHB was one of the leading baseball franchises at the time.

- Created user interface concept designs for detailed review.
- Developed original interactive elements and components for final coded integration.
- Engineered interactive prototypes for senior programmers in Macromedia Director.
- Trained others in the use of in-house proprietary software for GUI development.
- Built 3D/2D interface elements which supported multiple languages, including Kanji.

Education:

Carnegie Mellon University, Pittsburgh, PA. 2001- 2004

Post graduate work in HCI and Robotics

Carnegie Mellon University, Pittsburgh, PA. May 1993

Bachelor of Fine Arts

The Kiski School, Saltsburg, PA. June 1988

Academic Diploma

Bucknell University, Lewisburg, PA.. Summer 1987

Governor's School for the Arts, Printmaking (scholarship)

UXweek with Adaptive Path. Washington DC, 2007

Design:

Sketch
InVision
Adobe CC
Axure
3D Studio MAX
Blender
Pencil, Paper and Whiteboard

Development:

Hand Code HTML/CSS/jQuery in Sublime Text
Laravel / MEVN
Github
Pivotaltracker / Jira
LAMP Stack Administration

Awards & Other Accomplishments:

Addy Gold Medal for UI/UX - 2015
The Extra Mile Award at BNY Mellon - 2010
3D interior modeling televised on HGTV's Designer's Challenge 2005
Nomination for the Museum Tech Award in Education 2003
Innovation Award – College of Fine Arts, Carnegie Mellon University 2002
Hallmark Cards Design Competition - Gold Medal 1989
Three Rivers Arts Festival - Honorable Mention in Painting 1988
Seton Hill College Art Festival - Illustration Award 1987

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