Karen Jirak, UI Architect, Lead, and Developer

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LINKS

Portfolio (ttps://karenblue.github.io/portfolio/), LinkedIn (https://www.linkedin.com/in/karen-jirak-a05619a/)

PROFILE

Passionate UI architect, toolset designer, team leader, and developer looking to make a bit of a difference in this world by building inclusivity, performance, and ease of use into one feature at a time.

SKILLS

- Agile methodology
- Angular
- C (Programming Language)
- CSS
- Gerrit
- Gradle
- Groovy
- HTML
- Internationalization
- JIRA
- jQuery
- JSON
- Java
- JavaScript
- JUnit
- LESS
- React
- Visual Studio
- Microsoft Windows
- Prolog
- Sass\SCSS
- TypeScript
- Unit Testing
- Unix
- Unreal Engine
- XML
- UX Design

EMPLOYMENT HISTORY

Jul 2022 — May 2024

Tools Developer, Epic Games

Cary, NC

- **Designed and Implemented Toolkit Builder**: Created a cutting-edge Toolkit Builder based on the generative UI principles from my patented User Interface Creation System at SAS. This innovation was instrumental in reskinning the modeling mode in Unreal Engine and played a key role in developing the Skeletal Mesh Editor and Avalanche toolkit, which were showcased at Unreal Fest 2023.
- **Reskinned Modeling Mode Using Toolkit Builder**: Utilized the Toolkit Builder to effectively reskin the modeling mode in Unreal Engine 5, ensuring a seamless and modern user interface that enhances the overall user experience.
- **Revamped the Place Actors Panel**: Rewrote the Place Actors panel and built additional tooling based on generative UI principles, with exciting new features to be released soon.
- **Scene Graph Project Dev**: Provided robust support for UObjects and prefabs in the details panel for the scene graph project, featured in the annual State of Unreal presentation at the Game Developers Conference. This enhancement allows users to bake behaviors as components directly into their game objects.
- **Led Native Window and Layout Improvements:** Spearheaded a project to deliver significant native window and layout improvements throughout Unreal Engine, enhancing user experience and productivity.
- **Collaborated with the Education Department**: Partnered with the education department to mentor students and judge game jams at UNC Greensboro, fostering the next generation of game developers.

Mar 2017 — Jul 2022

Principal Software Developer/UI Development Team, SAS Institute

Cary, NC

- **Patented Widget Library Abstraction Mechanism:** Designed and implemented a tool for the Widget Library Abstraction Mechanism (patent reference above), enabling the generation of highly performant and accessible web pages with ease.
- **UI Development Lead and Chief Implementor:** Led UI development and implementation for three product suites within SAS Visual Investigator: Workflow, Analyze and Import, and Audit. (See SAS Visual Investigator: Intelligence Analytics)

- **Performance and Accessibility Expert:** Served as an expert, pinch-hitter, fixer, and educator on performance and accessibility issues, specializing in the Angular framework, TypeScript, HTML, styling, API integration, and DOM misuse across Visual Investigator and Visual Scenario Designer products.

Mar 2015 — Mar 2017

Senior Software Developer, SAS Institute

Cary, NC

- **UI Creator/UI Development Lead:** Implemented approximately 95% of the Workflow user interface within Visual Investigator. Workflow, the task management suite, has been sold as a standalone product and generated millions in revenue.
- **Performance Issue Pinch-Hitter:** Tackled and resolved performance issues across all Visual Investigator products, ensuring optimal functionality and user experience.
- **UI Development Lead for Visual Scenario Designer:** Despite being new to the project, served as the UI Development Lead and chief implementor for the User Interface in the final release of the Visual Scenario Designer application.

Jan 2011 — Mar 2015

Software Developer, SAS Institute

Cary, NC

- **UI Lead for DOX Project:** Led the UI development for the DOX Project, a replacement for existing SAS internal documentation management products. Independently assembled a robust technology stack including Tomcat, Spring, Spring MVC, Spring JavaScript, Apache Tiles, HTML, CSS3, Dojo, and DWR.
- **Sole UX Designer and Developer for Publications Data Explorer:** Designed and developed the Publications Data Explorer, an internal SAS tool for querying Publications projects. This tool enabled views of test results, localization information, and facilitated mass updates.
- **HTML to ePub Book Converter Creator:** Developed a standalone HTML to ePub book converter tool and integrated it into the SAS proprietary XIS product, automating the conversion process for any XIS-authored book.
- **Flex Help WebDoc Contributor:** Contributed to the Flex Help WebDoc component and conceived/implemented a unit testing framework for it. This component served as the help system for the majority of SAS applications.
- **Automated Content Testing Infrastructure Creator:** Created the infrastructure for the Automated Content Testing product, an XML publication testing suite, ensuring high-quality documentation standards.

Nov 2005 — Jan 2011

Senior Software Engineer, EMC

RTP, NC

- **Project Manager and Tech Lead:** Designed and developed the internationalization of the Celerra product, modernizing a decade-old system with embedded strings deep within the Red Hat proprietary OS.
- **Daylight Savings Time Feature Lead:** Led the design and development of the daylight savings time feature, including creating an emergency patch to update the time zone database in the JRE for all customers.
- **Maintenance and Customer Support:** Addressed maintenance issues for Celerra Manager and Unisphere, often collaborating directly with customers to resolve problems efficiently.
- **Messaging Infrastructure Design:** Designed and implemented the messaging infrastructure of the Java storage application Celerra Manager, ensuring robust and reliable communication.
- **Global Team Leadership and Training:** Led and trained teams across the US, India, and China, fostering collaboration and ensuring high-quality output.

Jan 2003 — Nov 2005

Graduate Research Assistant, University of North Carolina at Greensboro

Greensboro, NC

- **Java Application Developer:** Developed a Java application to create and manage a Prolog knowledge base, facilitating the generation of personalized letters from genetics counselors to clients.
- **Usability Testing and Statistical Analysis:** Conducted comprehensive usability tests and performed statistical analysis of the results using SAS software, ensuring user-centric design and functionality..

EDUCATION

Master of Science in Computer Science, University of North Carolina at Greensboro

Greensboro, NC

Bachelor of Science in Biology, University of North Carolina at Chapel Hill

Chapel Hill, NC

PATENTS

Dec 2022

User Interface Creation System

One of the biggest financial drains for any technology company is constant change of widget libraries to keep up with current user interface trends, so we created a User Interface Creation System which will keep consumers of any widget library from having to update their applications if the underlying Widget Library changes. See https://patents.google.com/patent/US11537366B1/

CERTIFICATIONS

Jul 2024

Meta Advanced React Certification

ACADEMIC PAPERS

2005

User Modeling for Tailored Genomic e-Health Information

For this paper, I did the user interface which consisted of a drag and drop genetic diagram through which users could enter geneological information and had it generate a prolog knowledge base which was then used to generate clinical letters from genetic counselors to their clients. See: https://intranet.csc.liv.ac.uk/~floriana/UM05-eHealth/UM05-W6.pdf#page=37

2005

Communication of Uncertainty in Clinical Genetics Patient Health Communication Systems

For this paper, I did the user interface which consisted of a drag and drop genetic diagram through which users could enter geneological information and had it generate a prolog knowledge base which was then used to generate clinical letters from genetic counselors to their clients. See: https://intranet.csc.liv.ac.uk/~floriana/UM05-eHealth/UM05-W6.pdf#page=37