MINJOO CHO

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Objective & Skills

Objective

I am a polymathic software engineer designing and prototyping ideas for connected experiences with technical toolkits.

I have +10 years of experience working with multidisciplinary design/software teams and have successfully converted innovative ideas into high-fidelity technical prototypes.

I constantly learn and apply new technology to the prototypes to meet the demand for the rapidly evolving landscape of techniques and tools to build intelligence into products.

Focus Areas

Full Stack Development
Fast Prototyping (Internet of Things, Web)
Cloud Platform
User Centred Design

Skills

Software Development

Web - ReactJS, NextJS, TailwindCSS
Native - Android
API Development - Flask, FastAPI
Database - MongoDB, PostgreSQL
Cloud - AWS, GCP
DevOps - Docker, Git

Hardware Engineering

Embedded - Arduino, micropython
Prototyping - RaspberryPi, ESP32/8266
Protocols - MQTT, Websocket, HTTP

Emerging Technology

ML/AI - Langchain, huggingFace
AR/VR - Unity, ARCore, Playcanvas

Certificates

AWS Certified Developer Associate
Deep Learning Specialisation, Coursera
Machine Learning, Coursera

Languages

English (fluent)
Korean (mother tongue)
Japanese (fluent, C2)
Chinese (professional, C1)
German (intermediate, B1)

Work Experience

D-Ford London (Ford Motor Company)[1], Senior Software Engineer

06. 2021 – Present | London, United Kingdom

- Platform engineering: proposed and developed a full-stack IoT prototyping platform for enhanced development experience through automated tools based on microservice architecture
- Technical prototyping: applied technical capabilities into the Human-centred Design process to meet growing demands on tech-driven digital services in Ford's electric vehicles and to deliver new experiences using high-fidelity prototypes.

Related Skills: Platform Engineering · Git · Docker · DevOps · Software Architecture · API Development · Python · ReactJS · Flutter · NoSQL · SQL · Cloud Platform (GCP, AWS) · Usability Testing · User Research · Agile Development · Protopie · Figma · Protopie · Figma · UX Design · hardware prototyping

Indeed Innovation, Creative Technologist

05. 2017 – 04. 2021 | Hamburg, Germany

- Client consultation: project pitch, co-creation workshop, project progress report
- Technical prototyping: developed high-fidelity PoC prototypes to solve design problems spanning various industrial sectors (Aerospace, home appliances etc.)
- Marketing event support: End-to-end implementation and demonstration of interactive installations that converted emerging technology intro meaning user interactions

Related Skills: Fast-prototyping · Emerging technology · Technical consulting · Client management · Cloud Platform (GCP, AWS) · UX Engineering · Arduino · RaspberryPi

Samsung Creative Lab[2], Creative Strategist & Developer

06. 2013 – 10. 2014 | Suwon, South Korea

- Product strategy: product concept development, stakeholder management
- Prototype development: developed multi-modal prototype (hardware with haptic feedback, android application development for music visualisation)
- User research: planned and conducted user research in collaboration with the Korean Deaf Society
- Regular project progress report to C-level representatives

Samsung Electronics, Product Manager

01. 2011 – 12. 2014 | Suwon, South Korea

- Projects: Samsung Galaxy Tablet 10 Series, Google Nexus 10 (A joint-project with Google)
- Product Lifecycle Management: solved procedural issues during the entire product life cycle from the development stage to the end of production
- Regular project progress report to C-level representatives

Education

KAIST, MSc in Industrial Design

08. 2015 – 07. 2017 | Daejeon, South Korea

- Full scholarship
- Master's thesis: Calm Automaton, A DIY Toolkit for Ambient Displays

KAIST, BSc in Electrical Engineering

02. 2006 – 01. 2011 | Daejeon, South Korea

- Full scholarship

[1] D-Ford is an R&D lab focused on developing services, products, and visions for the future of mobility based on the human-centred design (HCD) approach.

[2] Samsung Creative Lab is Samsung incubation program for Samsung employees to incubate creative ideas into real projects

Last updated: 17. 04. 2023

This is the list of the projects that Minjoo worked on.

Interactive Installations

These projects were presented to explore the possibility of emerging technology as a medium for artistic storytelling. The development process took intensive learning-by-doing tactics where I actively acquired new technical skills while building experience for public participants in a short period of time. (avg 1.5 months)

a. **BRAIN PIANO**
   The interplay of artificial intelligence with human brain in the form of musical expressions
b. **HOW WILL AI CHANGE YOU**
   An artificial intelligence driven 3d mesh distortion of human portraits

Creative Development

These projects are conceptual IoT project mostly presented or demonstrated in academic conferences. Though a conceptual prototype, it was designed through iterative design processes, validated by a small group of users.

a. **CALM AUTOMATON**
   A DIY toolkit for ambient displays
b. **RATCHAIR**
   Furniture move itself with vibration

Industry Projects

These projects highlight my daily work in the current studio. As we all know, clients approach us for breakthrough ideas, however, (not always but mostly) with strong technical limitations. Each project highlights the journey of my thoughts to come up with solutions despite obstacles.

a. **SMART TROLLEY**

How can we track the food inventory in the air cabin without RFID tags?

b. **DIGITAL STEAM**

How can we ensure users of the cleaning quality while using steam devices?