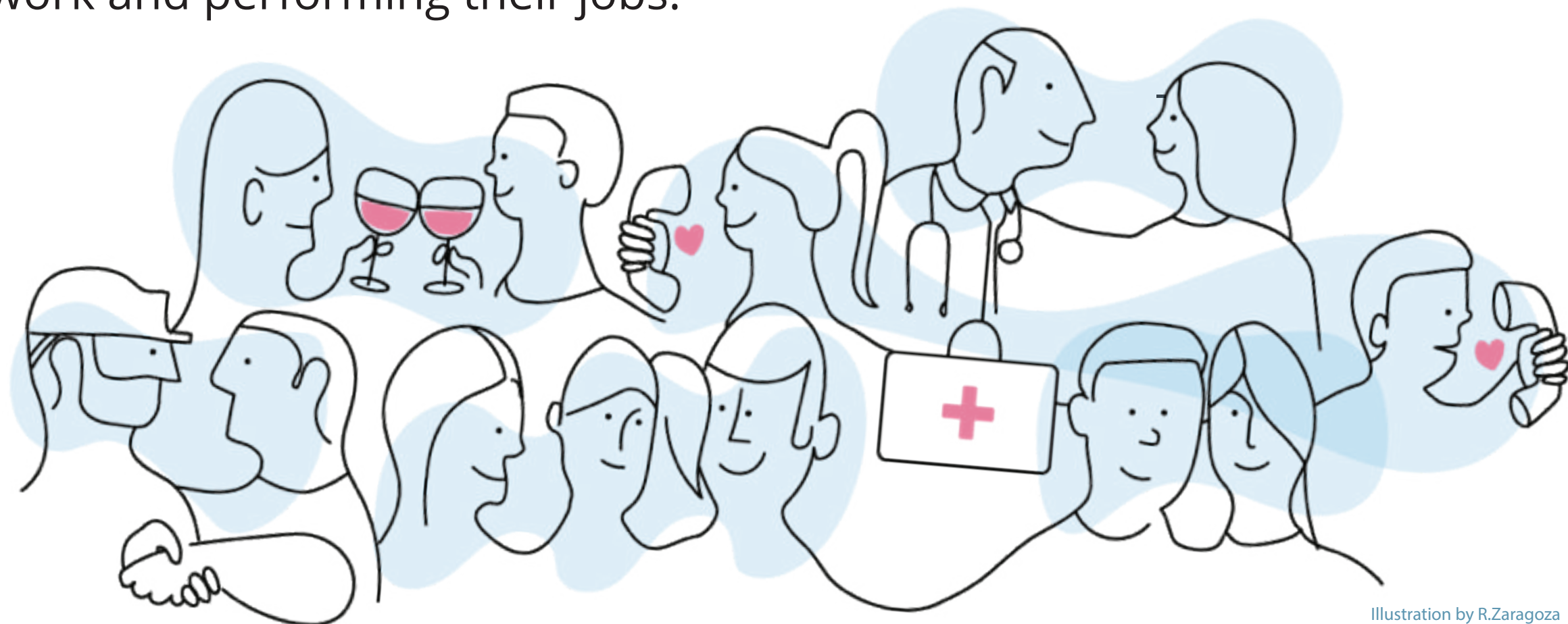# Empathics

Technology that can accurately observe, access, and report a companion's emotion state in order to support more effective communication.

Problem

75% of careers are derailed for reasons related to emotional competencies, including the inability to handle interpersonal problems, adapt to change, and elicit trust.
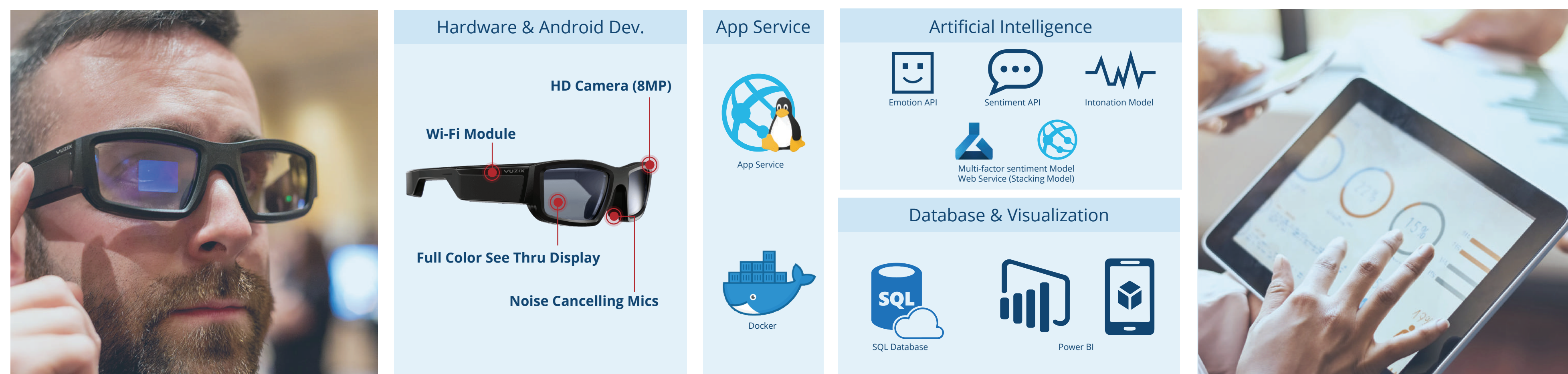
Success, in many careers, is heavily dependent upon the ability to communicate, empathize and connect with others. Without emotional awareness, the ability to receive others' emotions, people often have difficulty finding work and performing their jobs.
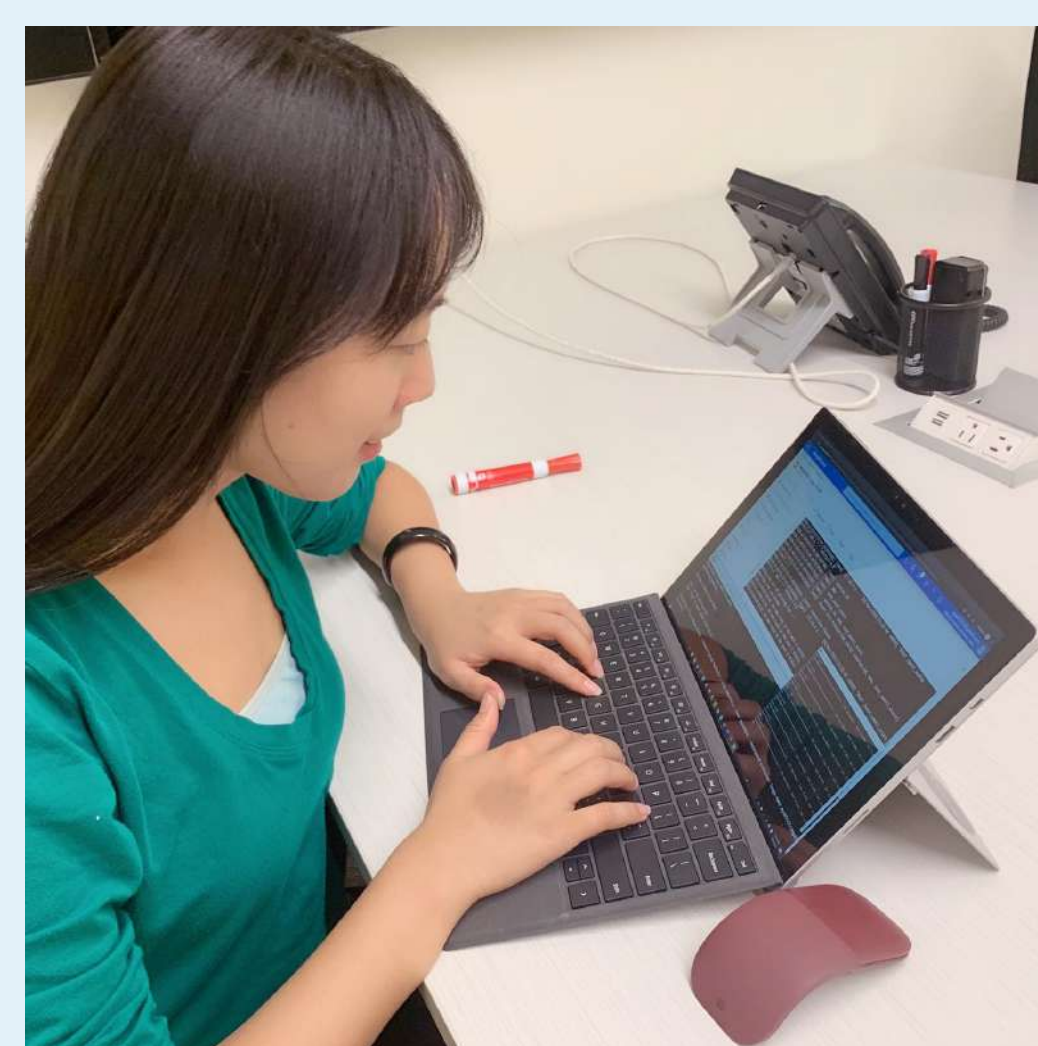
Illustration by R.Zaragoza

Solution

From the value proposition we proposed, we are developing a real-time emotion analysis system for Autistic people. By leveraging Vuzix's HD camera and noise cancelling mics, we can collect face images and audio data to retrieve facial expressions and speech content. We analyze the data through our cloud-based Multi-factor sentiment machine learning model.

After computing on the cloud, the glasses can provide haptic and visual feedback to users, so that they are aware of their conversation partner's emotions in real time. After the conversation, users can review the collected data on a mobile app for learning purposes.

Hardware & Android Dev.
HD Camera (8MP)
Wi-Fi Module
Full Color See Thru Display
Noise Cancelling Mics

App Service
App Service
Docker

Artificial Intelligence
Emotion API · Sentiment API · Intonation Model
Multi-factor sentiment Model
Web Service (Stacking Model)

Database & Visualization
SQL Database · Power BI

Process

Research → Interview → Developing → UX Testing → Evaluation

Build App services for handling the request from Vuzix glasses and communicating with AI services.

Develop the Android App for capturing images and recognize speech sentiment.

Test the clarity of the UI and intuitiveness of control.

Evaluate the functional prototype for medical use case.

"This concept has lots of promise... I'd like it if it could tell me the certainty of its judgement"
-James, Test Participant

"It's fascinating! I totally think it can be used for training or learning tools"
- Dr. Back, VitalTalk