

# KaizenEdge Input Taxonomy v1

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## Purpose

Define all user, environmental, clinical, and operational inputs that the KaizenEdge Lifestyle/Future SaMD platform shall accept, validate, and process. This document is aligned with FDA design input expectations and maps to JSON Schema validation.

## 1) Account, Locale & Consent

- User ID (UUID)
- Primary language (ISO 639-1)
- Secondary languages (array ISO 639-1)
- Units (metric, imperial)
- Timezone (IANA)
- **Accessibility needs**
  - screen reader
  - large text
  - dyslexia-friendly font
  - color-blind safe palette
  - captions
- **Consents**
  - marketing emails
  - data processing
  - device data sharing
  - clinical use participation
- **Notifications**
  - channels: push, email, SMS
  - frequency: realtime, daily, weekly

## 2) Demographics & Anthropometrics

- Birth date
- Sex at birth (female, male, intersex, prefer not to say)
- Gender identity
- Height (cm/in)
- Weight (kg/lb)
- Body fat %
- Waist circumference
- Hip circumference

- Life stage (infant, toddler, child, adolescent, adult, older adult)
- Pregnancy status (not pregnant, pregnant, postpartum)
- Pregnancy trimester (1, 2, 3)
- Lactation status

### 3) Clinical Conditions

- **Metabolic**
  - type 1 diabetes
  - type 2 diabetes
  - prediabetes
  - metabolic syndrome
  - PCOS
- **Cardiovascular**
  - hypertension
  - hyperlipidemia
  - coronary artery disease
  - heart failure
- **Renal**
  - CKD stage 1
  - CKD stage 2
  - CKD stage 3
  - CKD stage 4
  - CKD stage 5
  - nephrotic syndrome
- **Gastrointestinal**
  - celiac disease
  - Crohn's disease
  - ulcerative colitis
  - IBS
  - GERD
  - pancreatitis
- **Hepatic**
  - NAFLD
  - NASH
  - hepatitis A
  - hepatitis B
  - hepatitis C
  - cirrhosis

- **Respiratory**
  - asthma
  - COPD
  - sleep apnea
- **Endocrine**
  - hypothyroidism
  - hyperthyroidism
  - adrenal insufficiency
- **Neurologic**
  - epilepsy
  - migraine
- **Allergy/Immunology**
  - anaphylaxis history
- **Oncology**
  - active treatment
- **Bone & Joint**
  - osteoporosis
  - osteoarthritis
  - gout
- **Eating disorders (active)**
  - anorexia nervosa
  - bulimia nervosa
  - binge eating disorder
- **Pregnancy risk flags**
  - gestational diabetes
  - preeclampsia
  - hyperemesis gravidarum

## **4) Medications**

- **Anticoagulants**
  - warfarin
  - apixaban
  - rivaroxaban
- **Antiplatelets**
  - clopidogrel
  - aspirin  $\geq 81$  mg
- **Statins**
  - atorvastatin

- simvastatin
- lovastatin
- **Antihypertensives**
  - ACE inhibitors
  - ARBs
  - beta-blockers
  - calcium channel blockers
  - diuretics
- **Antidiabetics**
  - insulin
  - metformin
  - GLP-1 RAs
  - SGLT2 inhibitors
  - sulfonylureas
- **Thyroid meds**
  - levothyroxine
  - liothyronine
- **Anticonvulsants**
  - phenytoin
  - carbamazepine
- **MAO inhibitors**
  - phenelzine
  - tranylcypromine
- **Corticosteroids (systemic)**
  - prednisone
  - dexamethasone
- **Immunosuppressants**
  - tacrolimus
  - cyclosporine
- **Others requiring diet caution**
  - lithium
  - methotrexate
  - digoxin
- **OTC supplements**
  - vitamin A
  - vitamin D
  - iron
  - calcium

- fish oil
- St. John's wort
- ginkgo

## 5) Allergens & Intolerances

### ● Major allergens (Big 9)

- peanuts
- tree nuts
- milk
- egg
- fish
- crustacean shellfish
- wheat
- soy
- sesame

### ● Other allergens

- sulfites
- celery
- mustard
- lupin
- mollusks

### ● Intolerances

- lactose
- fructose
- histamine
- FODMAP sensitivity
- caffeine sensitivity

## 6) Dietary Patterns & Restrictions

### ● General

- omnivore
- flexitarian
- vegetarian-lacto-ovo
- vegetarian-lacto
- vegetarian-ovo
- pescatarian
- vegan

- **Medical/restricted**
  - gluten-free
  - low-FODMAP
  - renal-friendly
  - diabetic-friendly
  - low-purine
  - low-oxalate
- **Religious/cultural**
  - kosher
  - halal
  - Jain
  - Buddhist vegetarian
- **Metabolic goals**
  - ketogenic
  - low-carb
  - low-fat
  - Mediterranean
  - none
- **Sodium pattern**
  - DASH
  - low-sodium
  - none
- **Alcohol policy**
  - allowed
  - restricted
  - disallowed

## 7) Nutrition Targets

- Energy (kcal/day)
- **Macronutrients**
  - protein g/day (min per meal; max/day CKD)
  - carbohydrates g/day (max sugars; net carbs)
  - fat g/day
  - saturated fat g/day
- Fiber g/day
- Sodium mg/day; max mg/recipe
- Potassium mg/day (CKD)
- Phosphorus mg/day (CKD)

- **Micronutrients (per day)**

- Vitamin A (RAE µg), Vitamin D (IU/µg), Vitamin E (mg), Vitamin K (µg), Vitamin C (mg)
- Thiamin (mg), Riboflavin (mg), Niacin (mg), Vitamin B6 (mg), Folate (µg DFE), Vitamin B12 (µg)
- Calcium (mg), Iron (mg), Magnesium (mg), Zinc (mg), Iodine (µg), Selenium (µg), Copper (mg), Manganese (mg)

## 8) Taste, Ingredients & Culinary Preferences

- **Disliked flavors**

- bitter
- sour
- spicy
- sweet

- **Spice tolerance**

- none
- mild
- medium
- hot

- **Cuisine preferences**

- American (Southern, New England, Tex-Mex)
- Mexican (Yucatán, Oaxacan, Northern)
- Caribbean (Puerto Rican, Cuban, Dominican, Jamaican)
- Central American (Guatemalan, Salvadoran)
- South American (Peruvian, Brazilian, Argentinian, Colombian)
- European (Italian, French, Spanish, Portuguese, Greek, Turkish, German, Nordic, Eastern European)
- Middle Eastern (Levantine, Persian, Gulf)
- South Asian (North Indian, South Indian, Pakistani, Bangladeshi, Sri Lankan)
- Southeast Asian (Thai, Vietnamese, Filipino, Indonesian, Malaysian, Singaporean)
- East Asian (Chinese regional, Japanese, Korean, Taiwanese)
- African (Ethiopian, Moroccan, West African, South African)
- Oceanian (Australian, Māori, Polynesian)

- **Preferred cooking methods**

- bake
- roast
- grill
- sauté
- steam
- pressure-cook
- slow-cook
- sous-vide

- air-fry
- raw
- **Avoided cooking methods**
  - bake
  - roast
  - grill
  - sauté
  - steam
  - pressure-cook
  - slow-cook
  - sous-vide
  - air-fry
  - raw
- Ingredient must-include list (array)
- Ingredient must-exclude list (array)
- **Sweeteners allowed**
  - table sugar
  - honey
  - maple syrup
  - agave
  - stevia
  - sucralose
  - aspartame
- **Fat sources preference**
  - olive oil
  - butter
  - ghee
  - avocado oil
  - canola oil
  - coconut oil

## 9) Meal Logistics & Household

- Meals per day (1–6)
- Meal timing windows (start–end times)
- Fasting window (start–end, days per week)
- **Snack policy**
  - allowed/disallowed; max per day
- Household size



- **Portions per meal**
  - adult, child, toddler counts
- **Leftovers policy**
  - allow leftovers yes/no; reuse days
- **Meal prep time per meal**
  - 5–10, 10–20, 20–40, 40–60, >60 minutes
- **Cooking skill**
  - beginner, intermediate, advanced
- **Kitchen equipment**
  - stovetop, oven, microwave, blender, food processor, Instant Pot, air fryer, grill, sous-vide, stand mixer, toaster, bread maker, waffle iron
- **Food storage capacity**
  - fridge size (small/medium/large); freezer yes/no; pantry size (small/medium/large)

## 10) Budget, Stores & Inventory

- Budget per day (USD), Budget per week (USD)
- **Cost preference**
  - value-focused, balanced, premium/organic
- **Primary store**
  - Costco, BJ's, Sam's Club, Walmart, Whole Foods, Amazon Fresh, Trader Joe's, Target, Kroger, Safeway, Harris Teeter, Publix, HEB
- **Delivery services linked**
  - Instacart, Amazon Fresh, Walmart Delivery, DoorDash (grocery), Uber Eats (grocery)
- Store location (ZIP or store ID)
- In-app inventory sources enabled (per-store toggles)
- **Pantry/Fridge/Freezer inventory fields**
  - item name, quantity, unit, expiration date, lot if known
- **Cross-contamination sensitivity**
  - none, avoid shared equipment, strict segregation
- **Packaging preferences**
  - plastic-free priority, recyclable only, bulk sizes allowed

## 11) Geography, Seasonality & Sustainability

- Country (ISO 3166-1 alpha-2), Region/State, City
- **Seasonality preference**
  - in-season priority: high, medium, low
- **Sustainability focus**
  - low-carbon priority: high, medium, low

- **Organic preference**
  - always, sometimes, never
- Local sourcing radius (km/mi)

## 12) Fitness & Physical Ability

- **Primary fitness goals**
  - weight loss, muscle gain, endurance, mobility, general health, sport-specific
- **Activity baseline**
  - sedentary, lightly active, moderately active, very active, athlete
- **Available equipment**
  - bodyweight, dumbbells, kettlebells, barbell, rack, cable machine, resistance bands, rowing machine, treadmill, bike, elliptical, yoga mat, plyo box
- **Training modalities**
  - strength, hypertrophy, HIIT, LISS cardio, mobility, yoga, Pilates, sport drills
- **Session duration**
  - 10–20, 20–30, 30–45, 45–60, 60–90 minutes
- Sessions per week (1–14)
- **Schedule constraints**
  - days available; times per day
- **Injuries/limitations**
  - knee, hip, shoulder, wrist, elbow, lower back, neck, ankle; notes
- **Contraindications**
  - pregnancy supine after 20 weeks, uncontrolled hypertension, unstable angina, recent surgery, acute illness
- **Readiness markers (optional)**
  - RPE baseline, HRV available yes/no
- **Performance baselines (optional)**
  - VO<sub>2</sub>max, Resting HR
  - 1RM/est 1RM: squat, bench, deadlift, press
  - Pace: 1 mile/5k/10k
  - Mobility screens (notes)

## 13) Sensors & Device Integrations (optional)

- **Connected platforms**
  - Apple Health, Google Fit, Garmin Connect, Fitbit, Oura, WHOOP, Dexcom, Libre
- **Data ingested**
  - steps, HR, HRV, sleep duration, sleep stages, calories out, CGM glucose, weight log
- **Sync frequency**
  - realtime, hourly, daily

## 14) Food Safety & Compliance Controls

- **Raw/undercooked foods allowed**
  - sushi, rare beef, runny eggs (policy by life stage/pregnancy)
- Pasteurization requirement (milk/juice must be pasteurized)
- High-mercury fish exclusion (swordfish, shark, king mackerel, tilefish)
- Food recall subscription (enable recall checks)
- Expiration tolerance (no expired items; near-expiry allowed within N days)
- **Max fridge storage days by category**
  - poultry, beef, fish, leftovers
- **Minimum cook temperatures (°C)**
  - poultry 74, ground beef 71, fish 63

## 15) Labeling, Sourcing & Ethics

- **Certifications required**
  - USDA Organic, Non-GMO Project Verified, Certified Kosher, Certified Halal, Certified Gluten-Free
- **Animal welfare preference**
  - free-range, pasture-raised, cage-free
- **Fair trade priority**
  - high, medium, low

## 16) Personalization & Content

- **Brand voice preference**
  - concise, coach-like, friendly, clinical
- **Recipe format preferences**
  - metric vs imperial
- **Step detail**
  - compact vs detailed
- **Substitution policy**
  - no substitutions, allergen-safe only, budget-driven, any allowed
- **Content languages**
  - ISO 639-1 list

## 17) App Features & E-commerce

- Auto-carting enabled (yes/no)
- Auto-reorder staples (yes/no; cadence: weekly, biweekly, monthly)
- Coupon/loyalty programs (store card IDs)

- Delivery windows (time ranges; blackout times)
- Stripe customer ID reference

## **18) Data Governance (internal toggles)**

- **Logging level**
  - minimal, standard, verbose (PHI-safe)
- Anonymization for analytics (yes/no)
- Model personalization consent (fine-tune on my data: yes/no; default no)
- **Data residency**
  - US, EU

## **19) Pantry & Preference Memory**

- Favorite recipes (IDs)
- Disliked recipes (IDs + reason)
- Saved meal plans (IDs + dates)
- **Cookbook projects**
  - title, scope, frozen date for 'cemented' eBook