



Skills portfolio · IT · AI · Coding

Balmike Kumar

I'm a B.Sc. graduate with a keen interest in IT, AI and new technology. I learn by building: in my spare time I've taught myself coding, data handling and AI tools by making real, working projects. You can open every one of them below.



B.Sc. graduate



Keen interest in IT



Artificial Intelligence



New technology & development

7

skill areas

15+

tools & technologies

5

live projects

100%

self-taught

01

IT, AI & Coding Skills

What I've learned by building

What I can do

Building and testing my own apps taught me how software, databases and websites work from the inside, and how to use AI tools to get things done faster.

- ✓ Working with large data files: cleaning, sorting and finding patterns
- ✓ Pulling figures out of PDFs and Word files quickly, then cross-checking them
- ✓ Understanding how software, databases and logins actually work
- ✓ Keeping systems safe with good passwords, backups and privacy
- ✓ Making simple web tools and trackers to save repetitive work
- ✓ Using AI assistants for writing, summarising and coding



AI & New Technology

I keep up with AI tools and use them every day to write, test and review code faster. I also use AI to summarise long documents, draft content and find patterns in data, and I always check what it produces.

Practised in: AI-assisted development of all my projects, opt-in AI parsing in **Sense**



Security & Access Control

Access control and passwords/PINs, keeping secret keys out of code, regular backups and recovery, and version control so every change is recorded.

Practised in: **Mission BPSC** PIN-protected sync, key backups, Git history



Data Analysis

Cleaning, sorting and classifying records automatically, with rules that flag unusual entries for a closer look.

Practised in: **Sense** transaction parser (classify → rules → review)



Document Processing

Turning Word and PDF documents into structured, searchable data with Python. Extraction is done twice and checked by hand before anything is relied on.

Practised in: **Chemistry Notes**, PYQ extraction for Mission BPSC



Web Security

Checking a web application for common weaknesses: exposed keys, missing security headers, unsafe input handling and over-broad permissions. Each finding is fixed and then re-tested.

Practised in: repeated security reviews of my own apps



Data Privacy

Masking personal details such as account numbers on the device, consent banners, privacy policies and a working data-deletion process. I know what good personal-data handling looks like.

Practised in: **Sense** on-device masking, consent & deletion flow



Cloud, Automation & Testing

Cloud hosting and online databases, scheduled jobs and bots, and automated browser tests that confirm a system really does what it claims.

Practised in: Cloudflare, **Telegram reminder bot**, Playwright tests

02

Technical Toolkit

Languages and tools I've worked with



Coding

HTML

CSS

JavaScript

Python

Flutter / Dart

SwiftUI (basics)



AI

AI coding assistants

Prompt writing

Summarising documents

AI data extraction



Cloud & Data

Cloudflare Pages & Workers

Online databases

Telegram Bot API

JSON data



Tools & Practice

Git version control

Automated testing (Playwright)

Word / PDF automation

Mobile-first design

Education: B.Sc. My IT skills are self-taught through personal projects and a keen interest in technology. No formal IT certification yet.

[Home](#) / [Study timer](#)

Free aesthetic

Set a focus length, press Start, and a tree grows on the page. Countdown, [Pomodoro](#) and count-up modes, no sign-up, no ads.

SPECIMEN · TODAY

APP DEVELOPMENT · FLUTTER

Pagewood: Focus Timer

A calm study timer I made because I kept getting distracted by my phone while studying. A small tree grows on screen for every minute you stay focused.

- ◆ Pomodoro-style timer with a hand-drawn growing-tree animation
- ◆ Built once in Flutter, runs on Android and in the browser
- ◆ Works offline, with no sign-up and no ads

SKILLS USED

Flutter / Dart

Android

Animation

Offline storage

Open project ↗

pagewoodapp.com/study-timer sense

Good Afternoon
Overview

 **You're viewing sample data**
Add your first transaction and this is replaced with yours.

 **You're in guest mode**
Free, on this device, with unlimited tracking. Sign up free for cloud backup + AI insights.

Month

Week

October

TOTAL SPENT — MONTH

£5,284.00

of £20,000.00 budget - 26% used
£588.64/day left to stay on budget



THIS WEEK

£2,940.00

AVG / DAY

£754.86


Dashboard

WEB APP · DATA & AI

Sense: Expense Tracker

A personal expense tracker I built to manage my own monthly spending. It sorts expenses into categories and shows where the money goes.

- ◆ Automatic classification of transactions using rules, with optional AI help
- ◆ Personal details masked on the device, and data stays offline
- ◆ Try it without an account using sample data

SKILLS USED

JavaScript

PWA

Data classification

AI parsing

Privacy

Open project ↗

sense.moneymanager-app.com

Mission BPSC

72nd BPSC prep tools — sy

Mains — Daily Dashb

Plan, XP/streak, answer-wr

Mains — PYQ Notes

PYQ-linked notes with spa

Prelims — Dashboard

Reading pace planner, mo

PLANNER · AUTOMATION

Mission BPSC Study Dashboard

My personal study planner. It keeps me consistent with daily targets, revision reminders and a streak counter.

- Notes linked to previous-year questions, with spaced-repetition revision
- Telegram bot sends a reading pack every morning and evening
- Syncs between phone and laptop, protected with a PIN

SKILLS USED

JavaScript

Cloudflare Workers

Telegram Bot API

Scheduling

Open project ↗

mission-bpsc.pages.dev

BK BY BKV · BPSC 72ND PRELIMS

Quiz Library

Self-study revision quizzes for the BPSC 72nd Prelims. Source facts with original questions, four options, and an explanation after every answer.

4 study sets · 3,905 questions across 3 quizzes

CURRENT AFFAIRS 2025-26

Monthly Current Affairs

Month-wise national events of the year — 924 original questions from the 2025-26 revision material, with source facts explained after every answer.

• 924 questions

NOTES · READ & HIGHLIGHT NEW

Chemistry Notes

All 11 units of the Chemistry revision notes on one page. High-yield facts and exam traps colour-coded, with a downloadable PDF and in-page highlighting that syncs to this device.

• 11 units · 50 topics

WEB DESIGN · RESPONSIVE

Quiz Library

A free revision site where I collected my practice quizzes in one place. It works on phone and desktop, and you don't need to log in.

- Quiz engine with an instant explanation after every answer
- Progress saved on the device, with no server needed
- A+/A- text size controls for easy reading on mobile

SKILLS USED

HTML

CSS

JavaScript

Responsive design

Open project ↗

bkv-bpsc.pages.dev

UNIT 1

- 1.1 Atomic Models — Scientist Timeline
- 1.2 Subatomic Particles, Electronic Configuration & Quantum Rules
- 1.3 Atomic Number, Mass Number & the Isotope Family
- 1.4 Radioactivity & Applications of Isotopes

UNIT 2

- 2.1 States of Matter — Five States & Gas Laws
- 2.2 Mixtures — Solutions, Colloids & Suspensions
- 2.3 Separation Techniques
- 2.4 Phase Transitions & Latent Heat
- 2.5 Physical vs Chemical Changes
- 2.6 Types of Chemical Reactions

UNIT 3

- 3.1 Periodic Table — Historical Development
- 3.2 Periodic Table — Blocks, Groups & Trends
- 3.3 Metals vs Non-metals vs Metalloids
- 3.4 Reactivity Series & Metal Reactions
- 3.5 Corrosion — Rusting, Tarnishing & Prevention

UNIT 4

BY BKV · CHEMISTRY · BPSC 72

Chemistry —

All 11 units in one page — at a glance. You can click on any line to highlight it for yourself. The coding below follows the original document.

High-yield fact Exam trap

BPSC CHEMISTRY — FILE 1
Atomic Structure / Physical & Chemical Properties

Bold ORANGE numbers = high yield fact

WHERE THESE QUESTIONS COME FROM
BPSC/UPPSC PYQs (39th-71st)
(Everyday/Applied, Acids-Bases, etc.)
72nd BPSC General Science book

1.1 Atomic Models —

In one line: Every major atom model is based on Rutherford's experiment, and WHAT limits it.

NUMBERS TO REMEMBER
Maharishi Kanad (~600 BCE, India)
Democritus (5th c. BCE, Greece)
Antoine Lavoisier (18th c., France)
John Dalton (1808, England): Atomic theory

PYTHON · DOCUMENT CONVERSION

Chemistry Notes Reader

I wrote a Python script that turns a long Word document into a clean reading page, with a contents sidebar and colour-coding for important facts.

- Converted 11 units, 50 topics and 132 tables automatically
- Select any line to highlight it, and the highlights stay after reload
- Downloadable PDF copy for offline reading

SKILLS USED

Python

Word → HTML

JavaScript

PDF

Open project ↗

bkv-bpsc.pages.dev/bkv-chemistry-notes

04 Other experiments

PROTOTYPE · IPHONE

Photo Cleanup

A small iPhone app prototype for sorting a cluttered photo gallery by swiping to keep or delete. I built it to learn SwiftUI. It isn't published.

AUTOMATION

Study reminder bot

A Telegram bot that sends my revision list twice a day. I mark each question Easy, Good or Hard, and it decides when to show it again.



Why I do this

I enjoy solving small everyday problems with technology. These projects taught me how to organise information clearly, automate routine work, and make things simple for the person using them. I'm happy to help with similar small tools or digital work in the office whenever needed.

Balmike Kumar · Skills portfolio · 2026