JKUAT Multimedia Lab Hardware and Software Recommendations

Introduction

This report presents recommended hardware and software tools for the new JKUAT Multimedia Lab, designed to support effective communication of research and student projects both within the university community and with external stakeholders.

Hardware Recommendations

Input Devices

|  |  |  |  |
| --- | --- | --- | --- |
| Device Type | Recommended Model | Specifications | Purpose |
| Document Scanner | Epson DS-30000 | 70ppm scan speed, 4200 dpi max resolution, ADF capacity 120 sheets | Digitizing research papers and student assignments |
| Graphics Tablet | Wacom Cintiq Pro 27 | 27" display, 4K resolution, 99% Adobe RGB coverage, 10-point multi-touch | Digital art, design work, and precision editing |
| Webcam | Logitech Brio 4K Pro | 4K resolution, 90fps, 5x digital zoom, auto light correction | High-quality video recording and streaming |
| Microphone | Blue Yeti X Professional | 4 pickup patterns, 24-bit/192kHz, high-pass filter, built-in LED meter | Audio recording for voiceovers and interviews |
| 360°Camera | Insta360 X3 | 5.7K 360° video, FlowState stabilization, AI editing features | Creating immersive virtual tours of campus facilities |
| Motion Capture | Rokoko Smartsuit Pro II | 19 sensors, 100Hz refresh rate, wireless, 8-hour battery life | Animation projects and interactive applications |

Output Devices

|  |  |  |  |
| --- | --- | --- | --- |
| Device Type | Recommended Model | Specifications | Purpose |
| Monitor | Dell UltraSharp UP3221Q | 32" 4K, built-in colorimeter, 100% Adobe RGB, HDR | Color-accurate design and video editing |
| 3D Printer | Ultimaker S5 | Dual extrusion, 330 x 240 x 300mm build volume, 20-micron precision | Prototyping and physical model creation |
| VR Headset | Meta Quest 3 | 4K+ resolution per eye, 6DOF, wireless, hand tracking | Testing immersive experiences and VR applications |
| Audio Monitors | KRK Rokit RP7 G4 | 7" bi-amped drivers, Built-in DSP-driven EQ, flat frequency response | Audio mixing and mastering |
| Large Format Printer | Canon imagePROGRAF PRO-4100 | 44" width, 12-color LUCIA PRO pigment ink system, 2400 x 1200 | dpiPoster printing and large visual displays |

**Task 2: 2025 JKUSA Student Election**

**Website Concept:**

Let's create "JKUAT Voices" - an interactive platform where candidates can showcase their manifestos through various multimedia formats.

You need to:

* Create a website for the student elections
* Design a poster for campaign materials
* Show resolution differences between print and web materials
* Create a GIF banner for the website, with appropriate file size and dimensions

**Website Structure:**

1. **Homepage:**
   * Dynamic banner (your GIF animation)
   * Overview of election
   * Timeline
   * Quick access to candidate profiles
2. **Candidate Profiles:**
   * Photos and bios
   * Interactive manifesto presentations
   * Video messages
   * Position statements
3. **Issues Hub:**
   * Key campus issues presented visually
   * Interactive polls for student feedback
   * Data visualizations of student concerns
4. **Voting Guide:**
   * How-to information
   * Dates and locations
   * FAQ section

**Banner Design (GIF):**

* Animated transition showing diverse JKUAT students transforming into leaders
* Size: 728x90px (standard leaderboard)
* File size: Under 150KB for optimal loading
* Incorporate JKUAT colors and logo with election-specific elements

**Poster Design:**

* Create contrast between web (72dpi) and print (300dpi) versions
* Use bold typography and compelling imagery of campus landmarks
* QR code linking to the election website
* Clear call to action ("Your Voice, Your Choice, Your JKUAT")

For the election website:

1. **Interactive Voting Simulation** - Create a mock voting experience where users can practice voting before election day
2. **AR Candidate Posters** - Design posters with QR codes that launch AR experiences through smartphone cameras, bringing candidate photos to "life" to deliver their message
3. **Voice of the Campus** - Feature audio recordings from diverse student groups discussing what they want from their representatives
4. **Gamified Election Education** - Create a simple quiz game about JKUAT governance and student leadership
5. **Real-time Opinion Polls** - Interactive charts showing student opinions on key issues
6. **Day-in-the-Life Videos** - Show what current student leaders actually do daily

For your banner and graphics:

1. **Dynamic Weather-Responsive Banner** - A banner concept that would change based on actual weather in Juja
2. **Cultural Diversity Theme** - Incorporate traditional patterns from Kenya's diverse communities
3. **Campus Landmark Animation** - Animate iconic JKUAT buildings morphing into voting symbols

**Task 3: Graphic Creation**

**Creative Concept: "Student Journey Artifacts"**

Create an advertisement to "sell" your:

* School bag
* Old sweatshirts
* Last pair of shoes

The ad should:

* Target a specific audience
* Work for website, TV, and print (static and dynamic versions)
* Demonstrate various multimedia features (animation, scanned graphics, digital photos, video, audio)

Frame these items as meaningful artifacts from your academic journey with stories behind each item.

**School Bag Advertisement:**

* Headline: "This Bag Carried Dreams"
* Concept: Show the bag in multiple campus locations via timelapse
* Animation: Contents spilling out to reveal books, projects, and achievements
* Audio: Testimonial about how this bag witnessed your educational journey

**Sweatshirts Advertisement:**

* Headline: "Worn Through Seasons of Growth"
* Concept: Each sweatshirt represents a different phase of university life
* Animation: Sweatshirts transform to show different campus events they were part of
* Interactive: Clickable hotspots revealing memories associated with each

**Shoes Advertisement:**

* Headline: "These Steps Shaped My Future"
* Concept: Footprint visualization showing all campus locations visited
* Video: Shoes walking through significant moments (first day, exams, presentations)
* Audio: Footstep sounds mixed with ambient campus noises

For the personal items advertisements:

1. **Storytelling Through Objects** - Frame each item as having witnessed a key moment in your university journey
2. **"If These Items Could Speak"** - Give your items personalities and voices in the ads
3. **Before/After University Journey** - Show how these items transformed alongside your personal growth

**Task 4: Clickable Links to YouTube Videos**

**Video Organization:**

* Create a "Promise Tracker" interface
* Organize videos by categories (Academic Improvement, Student Welfare, Campus Development)
* Include transcript toggles below each video
* Add interactive timestamps for key points in each promise

**Implementation Ideas:**

* Use YouTube API for embedding with custom player controls
* Create a filtering system so students can view promises by topic
* Add a reaction system where students can indicate which promises resonate most
* Include a comparison feature to evaluate different candidates' stances on similar issues

Add to the website:

* Videos with transcripts
* Clickable links to campaign promise videos
* Navigation options for students to view specific promises

NOTE:  
Student Journey Artifacts: Creative Advertisement Concepts

Concept Overview

Instead of simply selling old items, this campaign frames your personal belongings as meaningful artifacts that have witnessed your academic journey at JKUAT. Each item tells a story and carries memories that potential buyers can connect with emotionally.

1. School Bag Advertisement - "This Bag Carried Dreams"

Static Print Advertisement

Creative Approach:

The print advertisement features the bag at the center, with ethereal streams of light emanating from it. Around the bag, small polaroid-style photos show glimpses of significant moments: first day at JKUAT, late-night study sessions, project presentations, and field trips. Each photo has a handwritten date and brief description.

Copy Elements:

- Headline: "This Bag Carried Dreams"

- Subheadline: "Four Years. Seven Notebooks. Countless Possibilities."

- Body Copy:"Every crease and worn edge tells a story. From the nervous freshman who first carried it across campus to the confident final-year student who stuffed it with research papers and dreams. This isn't just a bag—it's a time capsule of transformation."

- Call to Action: "Carry forward a legacy of perseverance. KSh 1,500."

Dynamic Web/TV Advertisement

Video Sequence:

1. Opening Shot: Close-up of the bag, sitting alone on a bench at JKUAT

2. Animation: Time-lapse showing the bag in different campus locations as seasons change

3. Transition: The bag opens in slow motion

4. Reveal: Items spill out representing different stages of university life (freshman orientation materials, sophomore textbooks, junior year project prototypes, senior thesis drafts)

5. Audio: Student testimonial: "This bag has been with me through all-nighters, breakthrough moments, and even that time I sprinted across campus to submit my assignment with 30 seconds to spare."

6. Closing Shot: New student picking up the bag, with text overlay: "Continue the journey. KSh 1,500."

Technical Elements:

- Background music that builds from hesitant to confident, paralleling the university journey

- Subtle sound effects of paper rustling, keyboard typing, and campus ambience

- Quick-cut montage showing the bag in rain, sunshine, library, and lab settings

- Animated infographic showing stats: "Carried 42 textbooks, 108 energy drinks, and 1 dream"

2. Sweatshirts Advertisement - "Worn Through Seasons of Growth"

Static Print Advertisement

Creative Approach:

The sweatshirts are arranged in a timeline formation, each representing a different year/phase of university life. Different lighting casts distinct shadows, with each shadow forming symbols representing different aspects of student life (academic, social, personal growth).

Copy Elements:

- Headline:"Worn Through Seasons of Growth"

- Subheadline:"Every Thread Tells a Story"

- Body Copy: "First year: nervous excitement (coffee stains included). Second year: finding my stride (and my study group). Third year: project marathons and breakthrough moments. Final year: ready for whatever comes next."

- Call to Action: "Wear the experience. Three sweatshirts, three stories. KSh 2,000 for the collection."

Dynamic Web/TV Advertisement

.Interactive Elements:

- Sweatshirts presented in a 3D rotatable interface

- Hoverable hotspots on each sweatshirt reveal memory snippets when clicked

- Timeline feature showing when each sweatshirt was worn and for which significant events

- Audio clips of ambient sounds from those events (cheering at competitions, lecture snippets, celebration moments)

Technical Elements:

- Each sweatshirt featured in different campus environments matching its era

- Split-screen animation showing "then vs. now" comparisons

- Augmented reality feature allowing viewers to "try on" each sweatshirt virtually

- Personal growth metrics visualized as infographics: "Confidence level: 42% → 89%"

3. Shoes Advertisement - "These Steps Shaped My Future"

Static Print Advertisement

Creative Approach:

The advertisement shows the shoes walking across a map of JKUAT campus, leaving colorful footprints that form a heat map of activity. The most frequent paths glow brightest, showing the journey from freshman classes to advanced labs.

Copy Elements:

- Headline: "These Steps Shaped My Future"

- Subheadline: "4,832 km of Campus Journeys"

- Body Copy: "They've walked to 1,246 lectures, paced through 37 all-night study sessions, dashed to 18 last-minute submissions, and strode confidently to 1 final presentation. The journey has left its mark on them—and they've left their mark on me."

- Call to Action: "Walk a path already broken in. KSh 1,200."

Dynamic Web/TV Advertisement

Video Sequence:

1. Opening Shot: Close-up of shoelaces being tied

2. Transition: First-person perspective walking through significant campus locations

3. Visual Effect: Time acceleration showing seasons changing, buildings being renovated

4. Data Visualization: Footstep counter and campus map building in real-time

5. Key Moments: Slow-motion for significant life events (first A grade, competition win, internship offer)

6. Audio: Footstep sounds mixed with ambient campus noises, conversations, lectures

7. Closing Shot: Shoes placed neatly by a door, ready for someone new

Interactive Elements:

- Clickable campus map showing stories from different locations

- "Mileage calculator" showing total distance traveled

- Timeline of significant milestones reached while wearing these shoes

- Side-by-side comparison of shoe condition from first day to present

Technical Implementation Notes

Multimedia Elements Integration:

- Animation: CSS animations and JavaScript for web; Adobe After Effects for video content

- Scanned Graphics: High-resolution scans of actual notes and assignments visible in the bag

- Digital Photos: Time-stamped photos showing the items throughout university years

- Digitized Video:Before/after comparisons and time-lapse sequences

- Audio: Narration, ambient sounds, and custom music representing the emotional journey

Production Requirements:

1. Photograph all items in high resolution against neutral backgrounds

2. Create consistent lighting and color schemes across all advertisements

3. Record authentic campus sounds for audio elements

4. Develop storyboards for dynamic content before production

5. Ensure both emotional appeal and clear product information

Cross-Platform Integration:

Each advertisement is designed to work across website, social media, television, and print with Aappropriate format adjustments while maintaining the core creative concept.