



**DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY**

**SCHOOL OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY**

**BY**

**NAME: KARARU TELVIN MARIKIO**

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**SUPERVISOR: DR JANE KURIA**

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# **Chapter 1: INTRODUCTION**

## **1.1 Who I am Today**

My name is Telvin Marikio Kararu, a young Information Technology professional whose life has been shaped by faith, family, education, and a sustained desire to use technology for the good of society. I come from Nairobi, Kenya, and have recently completed a Bachelor of Science in Information Technology at Dedan Kimathi University of Technology, a journey that has refined both my technical competence and my personal character. At present, I stand at the threshold between university and the professional world, reflecting on the path that has brought me here and the responsibilities that lie ahead.

## **1.2 Purpose of This Autobiography**

The decision to write this autobiography is informed by the need to document my personal, educational, and professional growth in a structured manner, as part of a comprehensive capstone project. Through this narrative, I seek not only to recount what has happened in my life, but also to interpret these events in light of the values and aspirations that guide me. The text therefore moves beyond mere chronology to offer critical reflection on success and failure, resilience and vulnerability, and the ways in which individual effort interacts with family support, community, and divine providence.

Although this text centers on my own story, it is situated within the wider context of Kenyan education and youth experience. Growing up and studying in Nairobi, Murang'a and later Nyeri has exposed me to diverse cultures, expectations, and socio-economic realities, all of which have influenced my worldview. The autobiography therefore contributes, in a modest way, to ongoing conversations about how young people negotiate challenges, leverage opportunities, and

construct identity in contemporary Kenya. In the chapters that follow, each phase of my life is presented chronologically yet analytically, so that the connections between my background, present achievements, and future ambitions become clear and meaningful.

## **Chapter 2: EARLY LIFE AND FAMILY BACKGROUND**

### **2.1 Birth**

I was born in the year 2000 in Pangani, one of Nairobi's older residential areas located close to the central business district. At the time, my parents were living in a rented apartment, a common arrangement for many young families seeking affordability and proximity to work and essential services in the city. Pangani's urban character marked by busy streets, mixed-income housing, and diverse residents formed the backdrop of my earliest stage of life, even though my personal memories of that period are necessarily limited by age.

### **2.2 Moving to Kasarani and growing up there**

When I was about five years old, my family relocated from the rented apartment in Pangani to a residential home in Kasarani, an expansive and rapidly developing area in the northeastern part of Nairobi. This move signified an important transition, reflecting my parents' desire for a more settled and secure environment in which to raise their children. Kasarani, with its combination of residential estates, schools, churches, and social amenities, became the setting of my formative memories, friendships, and early schooling.

Life in Kasarani offered a different rhythm compared to Pangani. The residential setting allowed for more open spaces, interaction with neighbours, and participation in community activities, while still retaining the cultural diversity characteristic of Nairobi. Growing up there, I began to understand myself not only as a member of my nuclear family, but also as part of a broader

community shaped by shared spaces and daily routines. These surroundings influenced my social development, teaching me to relate with people from various backgrounds while maintaining the principles I had learned at home.

### **2.3 My parents, brothers, and christian upbringing**

My parents, James Kararu and Lenity Karegi, provided a stable and nurturing foundation for my brothers and me. Both are devoted Christians, and their faith strongly influenced the atmosphere within our household and the decisions they made regarding our upbringing. From an early age, I was taught the importance of honesty, respect, hard work, and reliance on God, not merely through verbal instruction but through the consistent example my parents set in their work ethic, relationships, and responses to difficulty.

As the firstborn in a family of three boys, my position carried both privilege and responsibility.

My parents frequently reminded me that my younger brothers would look up to me, observing how I handled school, friendships, and challenges. This awareness gradually nurtured in me a sense of accountability, as I came to realize that my choices could either positively or negatively influence their paths. Over time, the role of firstborn evolved from a simple birth order into an internalized leadership identity, one that later manifested in formal positions such as deputy head boy and in informal roles within church and community.

Within this family context, my parents placed strong emphasis on both faith and education. Church attendance, prayer, and moral teaching were woven into our weekly routines, while schoolwork, punctuality, and respect for teachers were monitored closely. This integration of spiritual and educational priorities gave my childhood a clear sense of direction: academic success was to be pursued, but always within the boundaries of integrity, humility, and service to others. Looking back, the early years under the guidance of my parents and in the company of

my brothers, formed the bedrock upon which all subsequent stages of my life educational, social, and professional have been built.

## **Chapter 3: CHILDHOOD EXPERIENCES**

### **3.1 Responsibility and relationships**

My childhood was significantly shaped by my position as the firstborn in a family of three boys. From an early age, I became aware that my behavior, choices, and general outlook on life were closely observed by my younger brothers, who often modelled themselves after me. This implicit expectation encouraged me to be cautious about my actions, to take school and household responsibilities seriously, and to conduct myself in a manner that would set a positive example within the family.

Within the home, my parents entrusted me with small but meaningful duties, such as assisting my brothers with homework, helping to maintain order in shared spaces, and sometimes mediating minor disagreements. These tasks, though simple, taught me early lessons in leadership, patience, and conflict resolution, and they helped me to develop a sense of accountability that extended beyond my own interests. Over time, I came to understand that being firstborn was not only a matter of birth order, but also a formative training ground for the roles of responsibility and service that I would later assume in school and community.

### **3.2 Early church life and moral foundations**

Church life played a central role in my childhood, reinforcing the values taught at home and providing a wider community within which my character was shaped. My parents ensured that we attended church services regularly, and they encouraged active participation in worship, prayer, and age-appropriate church activities. Through sermons, Sunday school lessons, and

interactions with church leaders and peers, I was exposed to Christian teachings on honesty, humility, forgiveness, and love for others, which gradually influenced my understanding of right and wrong.

This environment offered more than religious instruction; it provided a support system that complemented my parents' efforts in moral formation. The church community modelled practical expressions of faith through fellowship, mutual care, and outreach activities, reinforcing the idea that belief should be reflected in conduct. As a child, participating in these practices helped me to internalize key moral principles and to appreciate the importance of living a life that honors God and respects other people. These early experiences laid the groundwork for the ethical framework that would guide my decisions in school, relationships, and later professional life.

### **3.3 Discovering leadership and confidence**

The combination of family expectations and church involvement created fertile ground for the emergence of leadership tendencies during my childhood. Opportunities to read in front of others, lead simple activities, or assist adults with organizational tasks gradually increased my confidence in public settings. I learned that leadership was not merely about authority, but about serving others, being reliable, and taking initiative when something needed to be done.

These early leadership experiences, though informal, prepared me for more structured roles in school, particularly in primary years when I would later become deputy head boy and take part in environmental and welfare initiatives. They also helped me to overcome natural shyness and to communicate more effectively with both peers and adults, skills that would prove essential in navigating diverse social environments in later stages of my education. In this way, my

childhood experiences formed a bridge between the intimate sphere of family and church and the wider institutional world of schooling and community leadership.

## **Chapter 4: PRIMARY SCHOOL EDUCATION**

### **4.1 My first formal learning home**

My primary education took place at Linet Academy, a school that became the primary setting for my intellectual, social, and leadership development during my childhood years. It was at Linet Academy that I first encountered structured learning, regular assessment, and the broad curriculum that would prepare me for the Kenya Certificate of Primary Education (KCPE) examination. The school environment, characterized by a mix of academic focus and co-curricular engagement, provided an enabling space in which my abilities and interests could begin to emerge in a more defined manner.

Linet Academy drew pupils from different parts of Nairobi and its environs, exposing me at an early stage to classmates of varied cultural and socio-economic backgrounds. This diversity offered daily opportunities to develop interpersonal skills, tolerance, and teamwork, complementing the values I had been taught at home and in church. The combination of committed teachers, supportive parents, and an increasingly competitive academic environment ensured that my primary school years were both challenging and formative.

### **4.2 Deputy Head Boy (2013–2015): Duties and Growth**

Between 2013 and 2015, I had the privilege of serving as the deputy head boy of Linet Academy, a role that significantly shaped my sense of responsibility and leadership. In this position, I assisted the head boy in representing pupils, supporting school discipline, and coordinating certain activities under the guidance of teachers and the administration. The appointment

signaled the trust that the school placed in my character and reliability, and it provided a formal platform for the leadership tendencies that had been nurtured at home and in church.

Carrying out the duties of deputy head boy required consistency, fairness, and the ability to communicate effectively with both peers and teachers. I learned to listen to the concerns of other pupils, to act as an intermediary when issues arose, and to uphold school rules even when doing so was unpopular. These experiences refined my decision-making skills, strengthened my confidence in public interaction, and taught me that leadership is as much about service and integrity as it is about authority or recognition.

#### **4.3 School contests and interacting with different walks of life**

During my years at Linet Academy, I actively participated in various contests and co-curricular activities, which further broadened my horizons. These contests brought together pupils from different schools and regions, enabling me to interact with children who held different perspectives and came from diverse cultural backgrounds. At a young age, I had to learn how to communicate respectfully, collaborate in teams, and adapt to new environments, all of which contributed to sharpening my social and communication skills.

Participation in such activities also nurtured discipline and healthy competition. Preparing for contests required extra practice, time management, and a willingness to receive feedback from teachers and peers. Through these engagements, I began to appreciate that education extended beyond the classroom and that co-curricular activities played an important role in developing confidence, critical thinking, and resilience. These lessons would later prove invaluable when interacting with people from different walks of life in secondary school, university, and professional settings.

#### **4.4 Championing tree planting and better meals**

One of the most defining aspects of my leadership at Linet Academy was my involvement in environmental and welfare initiatives between 2013 and 2015. Together with the head boy and under the guidance of teachers, I actively championed tree planting within the school compound. These activities were part of broader efforts in Kenyan schools to promote environmental conservation, climate awareness, and a greener learning environment for future generations. Participating in and sometimes mobilizing fellow pupils for such exercises deepened my appreciation for environmental stewardship and showed me that even young learners could contribute meaningfully to national and global sustainability efforts.

In addition to environmental work, I was vocal in advocating for improvements to the school meal menu. Acting on concerns shared by fellow pupils, I engaged with teachers and school administration to request more nutritious and varied meals. This experience taught me how to articulate collective needs respectfully and constructively, and it reinforced the idea that leadership involves speaking up on behalf of others while remaining mindful of institutional constraints. Although I did not participate actively in sports, my role in tree planting and welfare advocacy demonstrated that there were many ways to contribute to school life and to exercise leadership through service.

### **Chapter 5: TRANSITION TO ADOLESCENCE**

#### **5.1 Preparing for KCPE and life after primary**

The final years of my primary education at Linet Academy coincided with the onset of adolescence, a period marked by academic pressure, physical changes, and growing awareness of the future. Preparing for the Kenya Certificate of Primary Education (KCPE) examination

required a higher level of discipline and focus than earlier classes, as performance in this examination would determine the quality of secondary school I would join. Extra classes, regular revision, and continuous assessment tests became part of my routine, and I gradually learned to organize my time more carefully in order to balance schoolwork, leadership duties, and personal interests.

As the examination approached, expectations from teachers, parents, and even fellow pupils increased. KCPE was widely regarded as a crucial gateway to future opportunities, particularly in a system where access to national and extra-county schools was highly competitive and closely tied to examination results. While this created pressure, it also motivated me to work diligently, drawing on the study habits and sense of responsibility that had been cultivated throughout my primary school years. The experience of preparing for KCPE thus became not only an academic exercise but also an important step in my personal maturation.

## **5.2 Choosing Njiiri School as an Extra-County option**

Following the completion of KCPE, the question of which secondary school to join became central. Together with my parents and teachers, I carefully considered schools that were known for strong academic performance and holistic development. Njiiri School, an extra-county boys' school recognised for its consistent KCSE results and solid reputation, emerged as a preferred choice. Extra-county schools occupy the second-highest tier in Kenya's secondary education system, just below national schools, and they attract students from multiple counties based on merit.

Choosing Njiiri School was therefore both an academic and strategic decision. It represented an opportunity to learn in a competitive environment, access better resources, and interact with a diverse student body beyond my immediate locality. For my family, this choice also signified a

meaningful return on the sacrifices invested in my primary education, as gaining admission to a reputable extra-county school is considered an important achievement in Kenya's educational landscape. The selection of Njiiri thus marked the beginning of a new chapter, one in which my earlier foundations would be tested and expanded.

### **5.3 Fears, expectations, and the move to high school**

The transition from primary to secondary school brought with it a mixture of excitement and apprehension. On one hand, I looked forward to joining Njiiri School, meeting new classmates, and experiencing the relative independence associated with adolescence and, potentially, boarding life. On the other hand, I was conscious of the heightened academic standards, stricter routines, and the need to prove myself among peers who had also excelled in KCPE.

This period of transition coincided with the broader developmental changes typical of adolescence, including increased self-awareness, questions about identity, and concern about fitting into new social environments. I wondered how I would adapt to a new school culture, manage my responsibilities away from the familiar structures of home and primary school, and uphold the expectations of my family and teachers. Nevertheless, the strong moral and educational foundation laid in my earlier years gave me confidence that, although challenges were inevitable, I could navigate this new phase with diligence, faith, and resilience.

## **Chapter 6 – SECONDARY SCHOOL EDUCATION**

### **6.1 Settling into Njiiri School**

My admission to Njiiri School was secured on the strength of a KCPE score above 375 marks, a performance that placed me within the category of learners eligible for competitive extra-county institutions. Receiving the admission letter brought a deep sense of satisfaction to both me and

my family, as it confirmed that the effort invested in primary school had yielded a tangible and meaningful outcome. Njiiri School, known for its solid academic record and well-established traditions, thus became the arena in which my adolescent years would unfold.

The initial period of settling into Njiiri was characterized by adjustment to new routines, expectations, and social dynamics. The school environment was more structured and demanding than primary school, with a full timetable, regular assessments, and a culture that emphasized discipline and academic excellence. I had to learn how to manage increased academic workload, adapt to institutional rules, and establish myself within a student body drawn from different counties and backgrounds. Although the transition was at times intimidating, it also offered opportunities for growth in independence, resilience, and self-organization.

## **6.2 Faith and service: Christian Union, St. John's, and Red Cross**

Co-curricular involvement formed a central part of my life at Njiiri School. In keeping with the values nurtured at home, I joined the Christian Union (CU), where regular fellowship meetings, Bible studies, and prayer sessions provided spiritual nourishment and a sense of community. Participation in CU enabled me to deepen my faith, reflect on moral questions relevant to adolescent life, and interact with peers who shared similar beliefs and aspirations.

In addition to Christian Union, I became active in St. John's and Red Cross clubs, both of which emphasised service, first aid, and humanitarian values. Through these clubs, I received basic training in first aid and participated in activities that promoted care for others, discipline, and readiness to respond in times of need. The ethos of these organizations resonated with my interest in leadership through service and further reinforced the idea that education should prepare an individual not only for personal advancement but also for meaningful contribution to the welfare of others.

### **6.3 Chess Club and Mt. Kenya Tournament success**

One of the most intellectually stimulating aspects of my secondary school life was my involvement in the chess club. Chess appealed to me because it demanded concentration, strategic thinking, and patience—qualities that also support academic and personal growth. Regular practice sessions, internal competitions, and inter-school matches provided a structured environment in which I could challenge myself and measure my progress against other players.

A defining moment in my chess journey at Njiiri was participating in the Mt. Kenya chess tournament, where I competed in the under-17 category and emerged as second runners-up. This achievement was the result of consistent training, the guidance of club patrons, and the motivation drawn from fellow club members. The experience strengthened my confidence, taught me how to perform under pressure, and demonstrated that dedication can produce tangible results even in highly competitive settings. Beyond the trophy and recognition, the discipline acquired through chess would later influence how I approached problem-solving in academic work and software development.

### **6.4 Science Fairs, physics projects, and academic life**

Academically, Njiiri School provided a rigorous environment that encouraged inquiry and excellence across a range of subjects. I was particularly drawn to the sciences, and I actively participated in science fairs where I worked on Physics-related projects. These projects required identifying real-world problems, formulating hypotheses, designing experiments or models, and presenting findings to teachers and judges. The process helped me to develop critical thinking, creativity, and communication skills, and it nurtured a growing interest in understanding how scientific principles could be applied to practical challenges.

Beyond science fairs, everyday academic life demanded consistency and self-discipline. Regular examinations, laboratory sessions, and assignments kept me engaged and, at times, stretched my capacities. The school's academic culture, combined with the support of teachers and peers, encouraged me to aim for steady improvement rather than short-term success. This environment prepared me for the more advanced demands of university education and influenced my eventual decision to pursue a technology-oriented course.

## **6.5 Influence of Gift Masha and environmental leadership**

During my time at Njiiri School, I was particularly inspired by Gift Masha, who served as the environmental captain. His dedication to environmental conservation, tree planting, and maintaining a clean school compound left a strong impression on me. Under his leadership, environmental activities were conducted with seriousness and purpose, demonstrating that care for the environment was not an optional extra but a vital responsibility.

Gift's example resonated with my own earlier involvement in environmental initiatives at Linet Academy. Observing how he combined leadership, environmental awareness, and academic commitment showed me that it was possible to pursue science and technology while still remaining grounded in issues of sustainability and stewardship. His later decision to study Computer Science at Dedan Kimathi University of Technology further reinforced the link between environmental consciousness and technological innovation, providing a model that would subtly influence my own educational choices and aspirations.

# **Chapter 7 – DISCOVERING MY PASSION FOR TECHNOLOGY**

## **7.1 High school computer studies: From curiosity to passion**

My formal journey into the world of technology began in secondary school when I chose computer studies as one of my subjects. The computer laboratory, with its collection of machines and networked environment, quickly became one of my favorite spaces in the school. What initially started as curiosity about how computers operated gradually transformed into a deep interest in understanding both hardware and software, as well as the logic that underlies computing.

The computer studies syllabus introduced me to fundamental concepts such as computer systems, operating systems, word processing, spreadsheets, databases, and basic programming. Through theory lessons and practical sessions, I came to appreciate the power of computers to process information efficiently, support communication, and automate tasks that would otherwise be tedious or impossible. The more I interacted with these systems, the more I realized that computing was not merely an auxiliary skill but a central driver of modern life in education, business, health, and almost every other sector.

## **7.2 Seeing technology as a tool for solving problems**

As my understanding of computer studies deepened, I began to see technology not only as an object of interest but as a versatile tool for solving real-world problems. Lessons on databases, for example, illustrated how information could be stored, retrieved, and analysed to support decision-making in schools, hospitals, and businesses. Exposure to basic programming and applications demonstrated that, with the right skills, one could design systems that automate processes, enhance communication, and create new services.

This perspective was reinforced by observing broader discussions about the role of Information and Communication Technology (ICT) in Kenya's development. Studies and reports highlighted how ICT could facilitate efficient information management, expand educational opportunities, and support innovation, even though many schools and institutions still faced challenges in fully integrating technology. These insights led me to view computing as a field with enormous potential for impact, particularly in contexts such as education, agriculture, and health, where improved information systems and digital tools could directly benefit communities.

### **7.3 How Njiiri shaped my dream to study IT**

The environment at Njiiri School played an important role in consolidating my desire to pursue Information Technology at a higher level. The combination of structured computer studies, exposure to science fairs, and a school culture that valued academic excellence created a fertile ground for my growing interest in technology. Through practical sessions in the computer lab and engagement with teachers who were committed to ICT education despite systemic challenges, I saw that a career in technology was both attainable and meaningful.

At the same time, news and stories about the expanding opportunities in computer science and IT in Kenya and beyond underscored the relevance of this field in the digital age. I began to envision myself not only as a user of technology, but as a future creator of digital solutions that could address real needs in society. By the time I completed secondary school, the decision to pursue a Bachelor of Science in Information Technology felt like a natural extension of the passion that had been nurtured in Njiiri's laboratories, classrooms, and co-curricular activities.

## **Chapter 8 – AFTER HIGH SCHOOL**

### **8.1 Waiting period and reflections after KCSE**

Completing secondary education and sitting for the Kenya Certificate of Secondary Education (KCSE) examination marked the end of a significant chapter in my life and the beginning of an uncertain but hopeful transition. KCSE results in Kenya serve as the primary basis for university and college placement through the Kenya Universities and Colleges Central Placement Service (KUCCPS), making this period particularly sensitive for candidates and their families. After sitting the examination, I entered a waiting phase characterized by anticipation, reflection, and questions about the next steps in my academic and professional journey.

During this period, I had time to look back on my years at Njiiri School and to evaluate my strengths, weaknesses, and areas that required growth. The pause between secondary school and university application decisions allowed me to consider what kind of career I wanted to build and how best to align my interests, especially in technology, with realistic opportunities in the Kenyan context. It was a season of both introspection and planning, in which the guidance of mentors and the information available about different courses played a crucial role in shaping my eventual choice.

### **8.2 Mentors Boniface Mwaniki and Peter Ngugi**

At this crossroads, the influence of mentors became particularly significant. I drew guidance and insight from Mr. Boniface Mwaniki, a Systems Administrator at Erdemann Properties Limited, and Mr. Peter Ngugi, the Chief Accountant at the same organization. Their professional experiences in technology and finance, respectively, offered me practical perspectives on how academic choices translate into career paths.

Through conversations and observations, I came to appreciate how Mr. Mwaniki's expertise in systems administration demonstrated the importance of strong technical foundations, continuous learning, and attention to detail in ICT roles. His journey illustrated that technology professionals must combine theoretical knowledge with hands-on skills to remain relevant in a rapidly evolving field. On the other hand, Mr. Ngugi's work as Chief Accountant highlighted the value of integrity, accuracy, and strategic thinking in managing organisational resources, reminding me that technical work is often interconnected with financial and administrative considerations. Together, these mentors helped me to view higher education not as an abstract pursuit but as a deliberate preparation for real-world responsibilities.

### **8.3 Confirming the choice of BSc IT**

As information about university courses and placement options became available, I focused my attention on programmes that would allow me to develop strong competencies in computing. In Kenya, students who attain a mean grade of C+ and above in KCSE are eligible to apply for degree programmes, and KUCCPS coordinates their placement into universities based on merit and declared preferences. Within this framework, the Bachelor of Science in Information Technology (BSc IT) at Dedan Kimathi University of Technology stood out as a programme that closely matched my interests and aspirations.

The BSc IT programme at Dedan Kimathi University is designed to give students a strong understanding of core areas of Information Technology and to equip them with practical, industry-relevant skills under the guidance of experienced faculty. Reading about the curriculum and learning environment, and reflecting on my experiences in high school computer studies, convinced me that this course would provide a solid platform from which to build a career in software development and related fields. Supported by the counsel of my mentors, the

encouragement of my family, and my own sustained interest in technology, I confirmed the decision to pursue BSc Information Technology at Dedan Kimathi University of Technology, thereby opening a new and defining phase of my educational journey.

## **Chapter 9 – JOINING UNIVERSITY**

### **9.1 First days at Dedan Kimathi University of Technology**

Joining Dedan Kimathi University of Technology (DeKUT) marked a profound turning point in my life, as I transitioned from the structured environment of secondary school to the comparatively open and demanding world of higher education. Located near Nyeri, DeKUT is known for its strong emphasis on science, technology, and innovation, as well as a serene learning environment that contrasts with the more congested urban settings of many institutions. Arriving on campus as a first-year Bachelor of Science in Information Technology student, I was immediately struck by the blend of modern academic facilities libraries, laboratories, and lecture halls and the natural landscape surrounding the university.

The university organized an orientation programme for new students, during which key officers, faculty members, and student leaders introduced us to academic regulations, support services, and available opportunities. These sessions were essential in helping me understand the expectations placed upon undergraduates in terms of class attendance, assessment, and personal conduct, while also highlighting the numerous clubs, societies, and welfare structures available on campus. Although the amount of information shared during orientation was considerable, it provided a necessary framework for navigating the unfamiliar environment into which I had just stepped.

## **9.2 Adjusting to campus freedom and responsibility**

The shift from secondary school to university brought with it a new level of personal freedom, which was both liberating and challenging. Unlike in high school, where timetables and routines were tightly supervised, university life required me to take primary responsibility for managing my time, attending lectures, completing assignments, and balancing academic work with other activities. This autonomy demanded maturity, as there were fewer immediate external controls and greater potential for distraction or poor decisions if one was not disciplined.

At the same time, the academic environment at DeKUT was rigorous, with courses in Information Technology introducing complex concepts that required consistent study and practical engagement. Learning to plan my days, set personal targets, and seek clarification from lecturers or peers when concepts were difficult became essential for academic survival and growth. Gradually, I came to understand that university success depended not only on intellectual ability but also on self-management, perseverance, and a willingness to adapt to new teaching and learning styles.

## **9.3 Friendships and new communities**

Beyond academics, joining DeKUT opened up opportunities to build new friendships and become part of diverse communities. The university hosts a variety of clubs, societies, and student organizations, including Christian groups, professional associations, and technology-focused clubs, all of which contribute to a vibrant student life. Engaging with fellow students from different regions, cultures, and academic disciplines expanded my social world and exposed me once again to the richness and complexity of Kenya's diversity.

In this environment, I gradually formed friendships that provided both emotional support and academic collaboration. Group discussions, shared projects, and informal conversations in hostels, lecture halls, and open spaces helped to create a sense of belonging in what had initially felt like a large and impersonal institution. These relationships and communities would later become crucial as I navigated academic challenges, took on leadership and club responsibilities, and developed my identity as an emerging IT professional within the broader DeKUT community.

## **Chapter 10: ACADEMIC JOURNEY IN INFORMATION TECHNOLOGY**

### **10.1 Core IT courses and areas I enjoyed**

The Bachelor of Science in Information Technology at Dedan Kimathi University of Technology is structured to provide students with a comprehensive grounding in key domains of computing, including programming, databases, networking, systems analysis, and software engineering. From the outset, the curriculum exposed me to a range of units that progressively built both theoretical understanding and practical competence, reflecting the programme's aim of producing graduates who can respond effectively to the dynamic demands of the IT industry.

Within this broad structure, certain areas particularly captured my interest. Programming units, which required designing and implementing solutions in languages such as C++, Java, and later Kotlin and Python (as reflected in my project work), sharpened my logical thinking and problem-solving abilities. Database and networking courses, on the other hand, deepened my appreciation of how information is stored, secured, and transmitted in modern systems, reinforcing the idea that robust back-end infrastructure is essential for any reliable application.

These core IT experiences formed the academic backbone upon which my later projects and professional aspirations would be built.

## **10.2 Difficult units: Calculus, Probability and Statistics II**

Despite my enthusiasm for technology-related units, my academic journey was not without significant challenges. Among the most demanding courses were mathematics-oriented units such as Calculus and Probability and Statistics II, which I failed at certain points in my studies. These units required a deep conceptual grasp of abstract ideas, precise use of notation, and the ability to apply theoretical principles to complex problem-solving tasks. Like many university students for whom calculus and probability are major hurdles, I struggled with linking procedures to underlying concepts and with interpreting mathematically dense questions under examination conditions.

Failure in these units was a sobering experience that confronted me with my limitations and forced me to re-evaluate my study strategies. Rather than viewing these setbacks as permanent labels of inadequacy, I gradually learned to treat them as indicators of areas needing more deliberate effort and support. This involved seeking clarification from lecturers and peers, revising foundational concepts, and adjusting how I allocated time to different courses. Although these units remained challenging, the experience of confronting and working through academic failure significantly strengthened my resilience and humility, reminding me that growth often emerges through difficulty rather than ease.

## **10.3 Being home for two years and mental health struggles**

A particularly difficult phase of my academic journey occurred when, due to a combination of circumstances, I spent approximately two years at home away from active study. This prolonged

break disrupted the normal rhythm of university progression and was accompanied by periods of mental health strain, including episodes of discouragement and emotional exhaustion. Research has shown that university students in Kenya face a high prevalence of mental health challenges, with academic pressure, financial concerns, and uncertainty about the future being major contributing factors; my experience during this period reflected many of these realities.

Being away from campus for such an extended time created feelings of isolation and raised questions about whether I would be able to successfully resume and complete my degree. It required considerable inner work, support from family and trusted friends, and renewed reliance on my faith to gradually regain perspective and hope. Over time, I chose to view this difficult season not as the end of my academic story, but as a painful interruption that could still be integrated into a broader narrative of perseverance. This shift in mindset enabled me to prepare mentally and emotionally for returning to university and facing the remaining academic demands.

#### **10.4 Returning, recovering, and completing campus**

Resuming my studies after the two-year break required determination and a careful process of re-adjustment. Returning to DeKUT meant reintegrating into academic routines, reconnecting with lecturers and classmates, and in some cases re-taking units that I had previously failed or deferred. The experience of having been away, combined with the awareness of time lost, motivated me to approach my coursework with renewed seriousness and a clearer sense of purpose.

Gradually, through disciplined study, effective use of available academic resources, and support from peers and family, I was able to meet the remaining requirements of the BSc Information Technology programme. Completing campus under these circumstances was more than an

academic milestone; it was a testimony to the possibility of recovery after disruption, and a confirmation that setbacks whether academic or emotional do not have to define one's final outcome. This phase of my journey reinforced in me a deep appreciation for resilience, support systems, and the grace of God, all of which enabled me to reach graduation despite the obstacles encountered along the way.

## **Chapter 11 – PRACTICAL SKILLS DEVELOPMENT**

### **11.1 Joining GDSC DeKUT, DSAIc, and DeKUT Android Club**

Beyond formal coursework, a substantial part of my practical skills development took place within student-led technology communities at Dedan Kimathi University of Technology. I became an active member of the Google Developer Student Clubs (GDSC DeKUT), the Data Science and Artificial Intelligence Club (DSAIC), and the DeKUT Android Club. These groups provided an environment where students with shared interests in software development, artificial intelligence, and emerging technologies could learn collaboratively, attend workshops, and work on projects outside the constraints of the formal curriculum.

GDSC DeKUT, aligned with the global Google Developer Student Clubs initiative, focuses on empowering students to grow their development skills through events such as coding sprints, Android workshops, and “Build with AI” sessions. Participation in such activities exposed me to practical problem-solving, teamwork, and up-to-date tools and frameworks used in industry. Similarly, DSAIc aims to promote research, education, and hands-on training in Artificial Intelligence, Data Science, and Machine Learning through hackathons, speaker series, and collaborative projects, which helped me to appreciate the role of data-driven methods in addressing real-world challenges. The DeKUT Android Club complemented these experiences

by emphasizing mobile application development, giving me additional space to refine skills that would later feed directly into my Android-based projects.

## **11.2 Learning programming languages and frameworks**

Participation in these clubs, combined with coursework and personal study, allowed me to develop a broad and practical technical stack. Over time, I gained proficiency in several programming languages including C++, Java, Kotlin, HTML, CSS, JavaScript, and Python, as documented in my curriculum vitae. Each language contributed a different perspective: C++ strengthened my understanding of low-level concepts and efficiency; Java and Kotlin became central to my mobile development work; while HTML, CSS, and JavaScript underpinned my web development skills.

In addition to languages, I acquired experience with frameworks and tools such as Node.js, React, Django, and Flask for back-end and front-end development, as well as PostgreSQL, MySQL, Firebase Firestore, and Supabase for database and back-end services. Tools like Git, GitHub, VS Code, IntelliJ IDEA, Android Studio, Postman, and design platforms further supported version control, collaboration, testing, and interface design. The integration of these technologies in class assignments, club projects, and personal initiatives not only expanded my technical capabilities but also taught me how to choose appropriate tools for specific problems, an essential skill in professional software development.

## **11.3 Certifications: Zalego, CCNA, Linux, and Azure Fundamentals**

To consolidate my practical skills and demonstrate competence to future employers, I pursued several industries-relevant certifications. Early on, I undertook Front-End Web Development training at Zalego Institute, an ICT-focused training institution offering affordable,

practice-oriented courses in areas such as web design and development. This training strengthened my understanding of user interface design, responsive layouts, and client-side development, complementing the foundational knowledge gained at university.

In parallel, I completed Cisco-related certifications, including CCNA (Cisco Certified Network Associate) and Network Administration (Linux) through Cisco Netcad, which provided structured training in networking concepts, routing and switching, and the basics of managing Linux-based systems. These qualifications enhanced my appreciation of how networks function, how systems communicate securely, and how infrastructure underpins application performance. Additionally, earning the Microsoft Certified: Azure Fundamentals credential introduced me to cloud computing concepts and services, giving me a broader perspective on modern deployment environments and scalable architectures. Collectively, these certifications reinforced my commitment to continuous learning and positioned me as a more versatile and employable IT professional.

## **Chapter 12 – PROJECTS AND INNOVATIONS**

### **12.1 EcoSwap Android Application: Tackling waste and sustainability**

One of the most significant projects in my undergraduate journey was the development of EcoSwap, an Android application designed to promote the reuse and exchange of household items. According to my curriculum vitae, EcoSwap is a mobile-based platform that allows users to list items they no longer need, browse items offered by others, and arrange swaps or exchanges, with the broader goal of reducing waste and encouraging sustainable consumption. The application utilizes Supabase as a backend service for data storage and authentication, and

incorporates a warehouse model to manage bulk item storage, aligning with modern practices of building Android apps that rely on cloud-based backends.

From a technical perspective, EcoSwap was implemented in **Kotlin**, reflecting current best practices in Android development and enabling the use of modern libraries and tooling.

Designing and building the system involved database schema design, API interaction, user interface development, and integration of authentication and item-management workflows.

Beyond technical skills, the project deepened my understanding of user-centered design and environmental responsibility, as it required thinking carefully about how to make sustainable behavior such as reusing and swapping items both convenient and attractive to ordinary users.

## **12.2 Shamba Shape-app: Supporting Farmers Through Technology**

Another key innovation in my portfolio is Shamba Shape-app, a mobile agricultural management application developed in Java. As described in my CV, this app is intended to help farmers plan, monitor, and improve their farming activities by enabling them to track farm inputs, crop progress, expenses, and yields. In this sense, Shamba Shape-app aligns with a growing ecosystem of digital tools that support smallholder farmers with record-keeping and decision-making to increase productivity and sustainability.

Developing Shamba Shape-app enhanced my skills in building structured Android applications, designing intuitive interfaces for non-technical users, and modelling real-world processes such as input management and yield tracking within a software system. The project also required integrating persistent storage and designing workflows that mirror the actual cycles of farm management. Through this work, I gained a deeper appreciation of how technology can contribute to food security and rural development by providing farmers with accessible tools for managing information and making informed decisions.

### **12.3 Other Course Projects and Milestone Achievements**

In addition to EcoSwap and Shamba Shape-app, I engaged in various course projects and assignments that contributed incrementally to my growth as a developer. These included smaller web and desktop applications, database design tasks, and networking or systems administration exercises, many of which were undertaken individually or in small teams. Each project provided opportunities to apply theoretical concepts in practical contexts, debug real problems, and manage version control using tools such as Git and GitHub. Successfully completing these tasks and meeting project milestones reinforced my confidence and demonstrated that sustained effort over time could produce tangible, working solutions.

These cumulative experiences also taught me important soft skills: communicating within teams, documenting work clearly, and presenting project outcomes to peers and instructors. Over time, the habit of setting milestones, breaking tasks into manageable components, and tracking progress became a core part of how I approached both academic and personal projects. This disciplined approach would later prove essential when working on larger initiatives and during my internship in a real organizational environment.

### **12.4 Internship at Outspan Hospital: IT in a healthcare setting**

A pivotal extension of my project and innovation experience occurred during my internship at Outspan Teaching and Referral Hospital, where I served as an ICT intern. As indicated in my CV, this attachment took place from February 2025 to April 2025 and provided first-hand exposure to the application of IT in a healthcare setting. Typical ICT roles in such hospitals include installing and maintaining computer hardware and software, administering networks, troubleshooting technical issues, and supporting hospital information systems, all of which are critical to efficient service delivery.

During this period, I had the opportunity to apply classroom knowledge to real scenarios, supporting staff in resolving technical problems and observing how reliable ICT infrastructure underpins everyday clinical and administrative operations. Working alongside experienced ICT officers, I improved my diagnostic skills, customer support abilities, and understanding of how data and systems must be managed carefully in environments where confidentiality and uptime are crucial. The internship not only strengthened my technical competence but also affirmed my desire to pursue a career in Information Technology that directly contributes to the well-being and efficiency of organizations serving the public.

## **Chapter 13 – CHALLENGES FACED**

### **13.1 Interacting with people from different cultures and perspectives**

One of the recurring challenges across my educational journey has been learning to interact effectively with people from diverse cultural, social, and regional backgrounds. From primary school through secondary school to university, I constantly encountered classmates and colleagues whose perspectives on life, authority, faith, and success differed from my own. At times, these differences led to misunderstandings or discomfort, especially when communication styles or expectations were not aligned.

Over time, however, this challenge became an opportunity to develop intercultural communication skills. I learned to listen more attentively, to respect viewpoints that contrasted with mine, and to adjust my communication style to suit different contexts. Gradually, I became more comfortable working in diverse teams, whether in group projects, student clubs, or community activities, and this ability to relate well with others has become a key strength in my personal and professional life.

## **13.2 Academic Setbacks and Lessons Learned**

As previously noted, failure in units such as Calculus and Probability and Statistics II marked some of the most difficult academic moments in my university life. These failures challenged my confidence and raised questions about my capacity to cope with mathematically intensive material. Research shows that such difficulties are common among university students, who often struggle with the abstract nature of advanced mathematics and the problem-solving demands of probability and calculus.

Facing these setbacks forced me to confront my limitations honestly and to modify my approach to learning. I sought help from lecturers and peers, devoted more time to revising foundational concepts, and adopted more structured study strategies. Although the process was humbling, it taught me that failure can serve as a powerful catalyst for growth when it is met with reflection, support, and persistence. These lessons have shaped how I respond to challenges beyond the classroom, reminding me to remain teachable and resilient.

## **13.3 Cycling Accident, Hospitalization, and Trauma**

Outside the academic sphere, one of the most significant personal challenges I faced was a serious cycling accident. As an enthusiastic cyclist, I viewed cycling as a source of freedom, adventure, and physical fitness, but the accident abruptly disrupted this part of my life.

Following the crash, I required hospitalisation and a period of recovery, which involved both physical healing and grappling with the psychological impact of the event.

Experiences of cyclists documented in various accounts show that serious accidents can lead to fear, anxiety, and in some cases symptoms consistent with post-traumatic stress, making it difficult to return to the road. In my case, overcoming the trauma demanded time, reflection, and

gradual exposure to cycling again. I had to rebuild confidence step by step, acknowledging my fears while refusing to let them permanently define my relationship with a sport I loved.

Emerging from this experience, I gained a deeper appreciation for life, health, and the importance of balancing passion with caution and safety.

### **13.4 Climb to Educate and Mt. Kenya: Reaching My Limits**

Another defining challenge arose through my participation in the **Climb to Educate** initiative at Dedan Kimathi University of Technology, which organises expeditions to Mount Kenya as both an adventure and a fundraiser for educational support. Taking part in the climb required weeks of preparation, including physical training, mental readiness, and logistical planning, as the route involves significant elevation gain and extended hours of trekking.

Despite my commitment and effort, I did not reach the summit due to breathing complications that became increasingly serious as the altitude rose and oxygen levels decreased, a situation consistent with the challenges many climbers face on Mount Kenya. Choosing to stop the ascent for health reasons was emotionally difficult, as it felt like falling short of an important goal, yet it also represented a mature decision to prioritise safety over pride. In retrospect, the climb taught me that courage is not only measured by reaching the top but also by knowing when to respect one's limits, and that personal growth often lies in the journey itself rather than in the final elevation achieved.

## **Chapter 14 – VALUES, BELIEFS & MORALITY**

### **14.1 Christian Faith and Family Influence**

My values and moral outlook are deeply rooted in my Christian upbringing and the example set by my parents. Growing up in a home where prayer, church attendance, and biblical teaching

were central, I learned from an early age that faith was not merely a private belief but a way of life that should shape character and decisions. Christian Religious Education and church teachings reinforced virtues such as honesty, respect, obedience, and compassion, which were consistently emphasised as essential for personal integrity and harmonious living in society.

In a context where many families struggle to balance economic pressures with active moral guidance, my parents' commitment to our spiritual and ethical formation was particularly significant. They modelled hard work, simplicity, and generosity, and they expected us to uphold these values both at home and in public. As a result, my identity as a Christian has remained central throughout my educational and social experiences, providing a moral compass in moments of both success and hardship.

#### **14.2 Service to Community: Church Activities and Children's Homes**

An important expression of my values has been involvement in community service initiatives, especially those organized through church. I joined a church-based organization that focuses on giving back to society through activities such as community clean-ups and visits to children's homes, where we donate items and spend time with vulnerable children. These activities have shown me the realities faced by individuals and families dealing with poverty, abandonment, or other hardships, and they have strengthened my conviction that faith must be accompanied by practical acts of love and solidarity.

Participation in clean-up exercises and environmental awareness programmes has also heightened my sense of responsibility toward the physical environment. Youth-focused initiatives in Kenya increasingly emphasize environmental stewardship and social responsibility as key components of responsible citizenship, and my involvement in such programmes has aligned closely with these ideals. Through this service, I have come to understand that genuine

leadership is measured not only by titles or achievements but by a willingness to contribute quietly and consistently to the well-being of others.

### **14.3 Environmental Responsibility and Outdoor Adventure**

My concern for the environment is further reflected in my long-standing involvement in tree-planting activities at both primary and secondary school levels, and in my love for outdoor adventure, including cycling and mountain climbing. School-based initiatives across Kenya have increasingly used tree planting and related activities to instil environmental consciousness among learners and to combat climate change and land degradation. Being part of such efforts taught me that even small, local actions—such as planting and nurturing trees—contribute to broader ecological goals and future generations' quality of life.

Outdoor pursuits such as cycling and participating in the Climb to Educate expedition to Mount Kenya have reinforced values of discipline, perseverance, and respect for nature. These activities demand physical effort and mental resilience, but they also provide space for reflection and appreciation of the natural world. Even when faced with setbacks, such as my cycling accident or having to stop the Mount Kenya ascent due to breathing difficulties, I have continued to view outdoor adventure as a means of personal growth and as a reminder of the importance of caring for both body and environment.

### **14.4 Personal Principles in Technology and Work**

As an emerging IT professional, I recognize that technology carries significant ethical implications, especially in relation to privacy, security, fairness, and the potential for both positive and negative societal impact. Contemporary discussions on ethics in information technology emphasize principles such as honesty, integrity, accountability, respect for

intellectual property, and a commitment to using computing skills for the public good. These principles resonate strongly with my Christian and family values, and they shape how I aspire to conduct myself in professional settings.

In practical terms, this means striving to be transparent about the purpose and limitations of systems I help to build, protecting confidential information entrusted to me, and avoiding practices that exploit users or communities. I am also committed to continuous learning about emerging ethical issues in areas such as data science, artificial intelligence, and cloud computing, recognizing that technical excellence must go hand in hand with moral responsibility. Ultimately, my goal is to ensure that my work in technology honors the dignity of users, aligns with my faith-based values, and contributes constructively to society.

## **Chapter 15 – FUTURE AMBITIONS**

### **15.1 Becoming a Skilled Software and Mobile Developer**

One of my foremost long-term ambitions is to become a highly skilled software and mobile applications developer capable of designing, building, and deploying solutions that address real needs in society. This goal is a natural extension of the knowledge and experience gained during my BSc in Information Technology, my involvement in developer communities such as GDSC DeKUT, and the projects I have undertaken, notably ECOSWAP and Shamba Shape-app. I envision deepening my expertise in programming languages, frameworks, and cloud platforms, and continually updating my skills to remain relevant in a rapidly evolving technological landscape.

In pursuing this ambition, I aim to focus on areas where technology can have tangible impact, such as healthcare, agriculture, environmental conservation, and community services, building

on the themes already present in my project work and internship experience. My objective is not only to produce technically sound applications, but also to create solutions that are user-friendly, accessible, and sensitive to the contexts in which they are deployed. Over time, I hope to be recognized as a dependable developer whose work combines technical quality with social relevance.

## **15.2 Growing into a Technology Leader and Mentor**

Beyond individual technical competence, I aspire to grow into a technology leader who mentors and empowers others, especially younger students and aspiring developers. My experiences as a firstborn, deputy head boy, club member, and participant in various university communities have shown me the importance of guidance, encouragement, and example in shaping people's trajectories. Similarly, the impact of mentors such as Boniface Mwaniki and Peter Ngugi has demonstrated how experienced professionals can help young people make informed decisions and navigate complex career paths.

In the long term, I hope to contribute to mentorship initiatives within and beyond university settings, particularly in communities where access to quality guidance is limited. This may involve leading or supporting developer clubs, organizing training sessions, participating in outreach programmes, or informally mentoring individuals who show interest in technology. As I gain more experience, I intend to cultivate leadership qualities such as integrity, empathy, clear communication, and strategic thinking, so that my influence as a leader is grounded not only in technical authority but in genuine concern for the growth and well-being of those I serve.

### **15.3 Building a Socially Responsible Tech Initiative or Startup**

A further ambition is to build or co-found a socially responsible tech initiative or startup that leverages Information Technology to address pressing challenges in my community and beyond. The ideas behind ECOSWAP and Shamba Shape-app—reducing waste through item reuse and supporting farmers through better information management—have convinced me that thoughtfully designed digital tools can contribute meaningfully to sustainable development. Additionally, my exposure to the needs observed in healthcare settings such as Outspan Hospital and in community outreach activities has sensitised me to gaps that technology could help to fill. In pursuing this goal, I envision an organization that balances commercial viability with clear social objectives, such as promoting environmental sustainability, improving access to services, or empowering youth through digital skills. This will require not only technical competence but also entrepreneurial skills, collaboration with professionals from other fields, and adherence to strong ethical standards in the design and deployment of technological solutions. Ultimately, I hope that such an initiative will stand as a practical expression of my values—faith, service, integrity, and innovation—translated into systems and services that improve people's lives.

## **Chapter 16 – CONCLUSION**

### **16.1 Key Lessons from My Journey**

Looking back from my birth, through childhood, primary and secondary schooling, and university life at Dedan Kimathi University of Technology, a number of key lessons emerge from my journey. These include the importance of a strong moral and spiritual foundation, the value of disciplined effort in education, and the central role of resilience in overcoming setbacks such as failed units, periods away from school, and personal health challenges. My experiences have

shown that growth is rarely linear; it often involves detours, pauses, and difficult seasons that, when faced with faith and determination, ultimately contribute to a deeper and more mature character.

Another important lesson has been the power of community family, mentors, teachers, friends, and church members in shaping both my opportunities and responses to adversity. At each stage, supportive people have helped me to see beyond immediate obstacles, to recognize my potential, and to refine my goals. This has reinforced my conviction that no individual succeeds entirely alone, and that it is both a privilege and a responsibility to become such a source of support for others in turn.

## **16.2 Gratitude to Family, Mentors, and Friends**

It is therefore fitting to conclude this autobiography with an expression of gratitude. I am deeply thankful to my parents, whose Christian upbringing, sacrifice, and unwavering belief in my potential laid the foundation for all my educational and personal achievements. I am equally grateful to my brothers, whose presence has given meaning to my role as firstborn and whose lives continue to inspire me to be a better example.

I also acknowledge with appreciation the teachers, lecturers, and mentors who have guided me, including those at Linet Academy, Njiiri School, and Dedan Kimathi University of Technology, as well as professionals such as Boniface Mwaniki and Peter Ngugi, whose counsel has informed my career aspirations. Friends and fellow students, particularly those encountered in clubs like GDSC DeKUT, DSAIc, and the DeKUT Android Club, have provided companionship, collaboration, and motivation throughout my academic journey. Their influence is woven into the fabric of this narrative, even when not mentioned by name.

### **16.3 Looking Ahead: A Life of Service, Faith, and Innovation**

As I look to the future, I do so with a sense of hope and responsibility. The ambitions outlined in the preceding chapter to become a skilled software and mobile developer, to grow into a technology leader and mentor, and to build a socially responsible tech initiative are not merely personal aspirations but expressions of a broader commitment to serve God, family, community, and country. I recognize that the skills and opportunities I have received carry with them an obligation to apply them ethically, creatively, and compassionately in addressing real problems in society.

In this regard, my journey is far from complete. The story told in this autobiography represents only the first chapters of a life that, by God's grace, will continue to unfold in ways that I cannot fully predict but for which I can prepare diligently. With the lessons of the past as guidance, the support of those around me, and a steadfast reliance on my faith, I move forward with the conviction that technology, when grounded in sound values, can be a powerful instrument for positive change and that my role is to contribute faithfully and excellently wherever I am placed.

