Raphta.

Reimagine The Possibilities of Technology

Durban University of Technology (DUT) is one of the most respected higher education institutions situated in the north of KZN. Throughout the years it has grown to about 33000 students across their campuses. The increase in the number of students means better systems needs to be in place to assist the institution to better manage and ensure that students have an improved experience on campus.
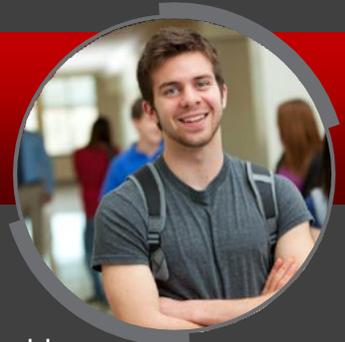
Problem Statement

Over the years the institution started realising a few challenges that they are facing; this includes but not limited to:

- Students not attending classes to meet the minimum requirements required to pass the subject

- Student's safety in and around DUT's various campuses

- Students paying other students to write exams and tests fraudulently on their behalf

- Processing of time and attendance needs to be automated

DUT realised this as a going concern, and and researched technology to assist with the above-mentioned challenges.
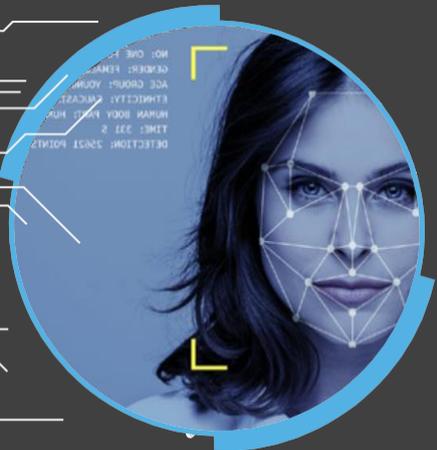
Solution

- ☑ Raphta in collaboration with Adapt IT created a solution to solve these problems specifically around the lecture attendance (time & attendance) and exam attendance.

- ☑ Raphta used their proprietary facial recognition and edge intelligence platform, Shuri Edge AI to enrol selected students and automatically identify these students as they came into the venue with high accuracy.

- ☑ Shuri Edge AI platform integrated with AdaptIT ITS Integrator to receive and write back student data

- ☑ Adapt IT created an exam/test application to visualize and report all the student data from ITS Integrator and generated by the facial recognition.
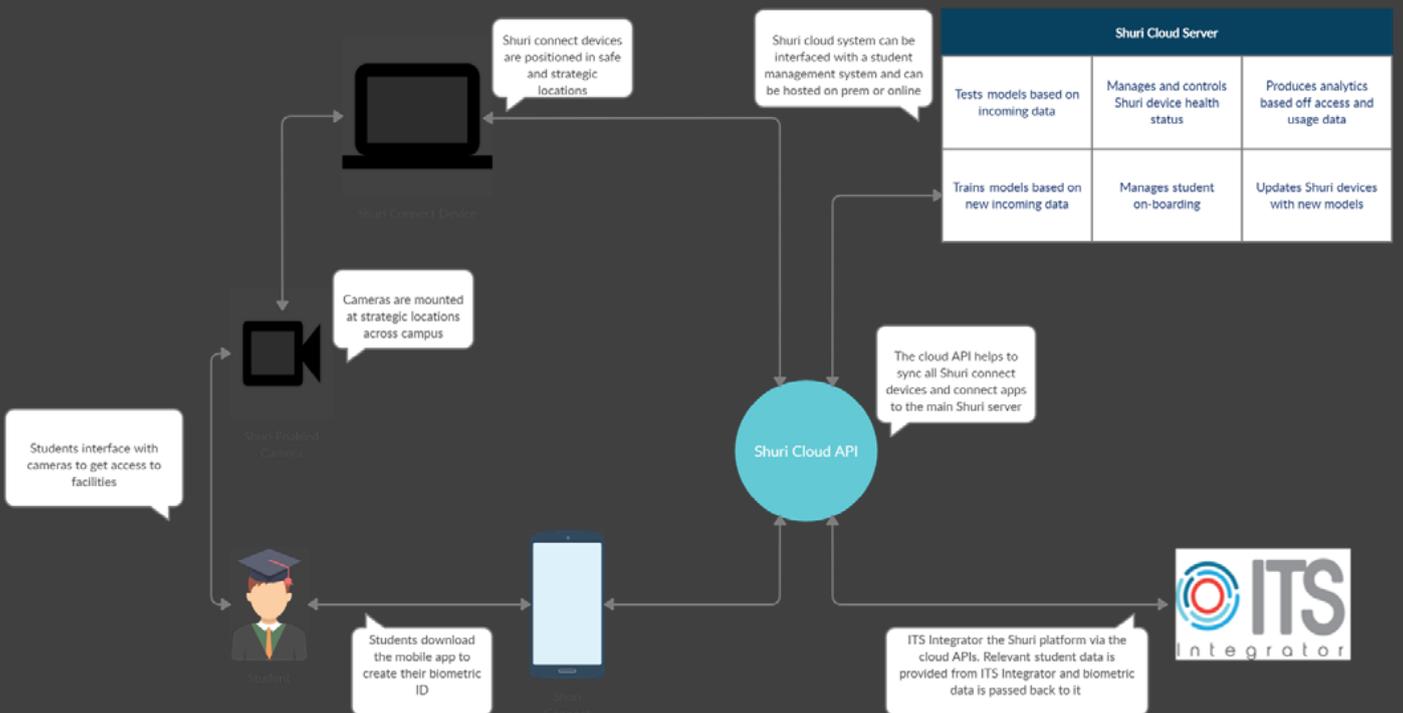
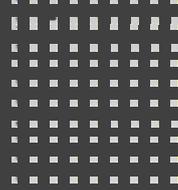**Shuri Edge AI achieved a 93-95% facial detection accuracy rate**

Shuri Edge AI results for the POC:

☑ Shuri Edge AI achieved a 93-95% facial detection accuracy rate

☑ Using a single camera, students coming into the large entrance of the lecture hall in large numbers and groups not facing the single camera installed in the entrance, having a partial view of some student faces and varying lighting conditions; Shuri's Edge AI accomplished an accuracy rate of 75% facial recognition. With more than one camera installed accuracy increase to over 90% in the wild.Facial recognition can process more than one face simultaneously in a single frame

☑ Shuri Edge AI platform outperformed some of the largest international vendors with top NIST ranking. One of the international vendors in a pilot achieved percentages of incorrect matches of up to 64%.

Because of Raphta's advanced capabilities, accuracy, edge intelligence, real-time processing, privacy features and lower cost, AdaptIT selected Raphta to be their preferred platform for smart campus solutions to rollout across 1000 institutions in Africa, Australia, Europe, and Asia.

About AdaptIT

AdaptIT provides cloud-ready and cost-effective solutions for the sound management of tertiary institutions. Through a web-based, mobile friendly, innovative student application and registration solution, management is able to monitor student intake numbers and related funding. Institutions are able to optimise infrastructure resources and increase student intake, through integrating face to face as well as distance learning. Finance and HR/Payroll modules assist management to drive institutional and individual performance and compliance by enabling detailed budgeting and reporting.

Providing a responsive solution that services over 2 million students in public and private institutions, AdaptIT Education has a tried and tested System Development Life Cycle SDLC approach to projects. Our international footprint includes: Europe, Ireland, Botswana, Mauritius and Kenya. Through our acquisition of ICAS and Wisenet, we have extended AdaptIT's capability to the Private Higher Education sector and, leveraging over 33 years of unparalleled Education experience, we are more than capable of partnering with any institution, irrespective of size.

AdaptIT Education now provides scalable solutions that support our customers through their various phases of growth, from a few hundred to tens of thousands of students. We currently have approximately one thousand customers, supporting over two million worldwide.

Visit www.adaptit.com for more information.

About Raphta

Raphta provides developers a low cost and low latency AI facial recognition and computer vision platform that removes AI bias and data privacy concerns, and overcomes infrastructure constraints. The Shuri developer platform is offered as cloud APIs and edge intelligence platform with its own proprietary AI edge processing device, Shuri Connect. Developers and technology companies can build unique and AI enabled mobile applications, SaaS and enterprise software using the Shuri platform. Raphta has evolved and become a leading pan-African AI company in South Africa, Kenya and Zimbabwe. The company was selected as The Top 10 Most Disruptive Face and Image Recognition Solutions Provider for 2020 internationally by Analytics Insight.

Visit www.raphta.com for more information.

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