



AKADEMIE VIR REKENAARWETENSKAP EN  
PROGRAMMATUURINGENIEURSWESE  
ACADEMY OF COMPUTER SCIENCE AND  
SOFTWARE ENGINEERING

# PROJEKTEDAG PROJECTS DAY

INNOVERING AKTUEEL!!  
INNOVATION ALIVE!!

"Kom aanskou kreatiwiteit en  
innovering in aksie!"

"Come witness creativity and  
innovation in action!"



UNIVERSITY  
OF  
JOHANNESBURG



Do you know who is viewing your Facebook profile Tracking what you are doing on the Internet? Reading your SMSes? Special presentations on Cyber Security and Cyber Protection for school learners and teachers (Facebook, Twitter, Cellphones)

Times: 11:30 and 13:00

Venue : Auditorium

# Third Year Projects

1	<b>iTronics developers</b>	The project is a web-based security software reseller system where resellers register and take online tests before they can purchase any Kaspersky software license keys. It also facilitates communication between registered resellers and the company.
2	<b>Intel-legit</b>	Our system is an interactive solution that aids in the production process of sugar sachets and ration packs. It accelerates the procurement process and enhances management aspects. The core features are mobility, for management purposes, and the forecasting of sales and stock levels.
3	<b>Net Solutions</b>	Net Solutions is developing an e-commerce website which will allow artists to create profiles in order to market and sell their art online. Our system allows customers to browse, rate, comment and purchase art.
4	<b>Pseudo Tech.</b>	Our project is a web application which will serve as a construction project management tool. Building plans are submitted by clients and reviewed by engineers. Other features include quote and report generation and quote and project tracking.
5	<b>X</b>	The Retail information Service (RIS) system provides access to information on market trends, product growth and geographical retail analysis of products. The service consists of desktop, mobile and web applications which allow for the integrated management of the process.

6	<b>Core Software Solutions</b>	Concintric circles is a global charity management system designed to removes the various hurdles that volunteers, donors and companies face when trying to participate in charity.
7	<b>S.E.F (Software Engineering Freaks)</b>	Our system manages meeting and boardroom scheduling. It allows for the management of meeting tasks and eliminates the paper-based process of scheduling. This system provides relevant reports pertaining to scheduled meetings.
8	<b>Equilibrium</b>	Our system will track the progress of each South African province's fulfilment of the UN Millennium Development Goals. This will be achieved by assessing the status of each province through data collection.
9	<b>ULTIM-8</b>	Convergence is a system designed to manage, assess and evaluate network towers for Telkom mobile provider 8ta. It is focussed on optimizing the efficiency and maintenance of the network towers.
10	<b>Exuberant Innovators</b>	The BEE verification processing system focuses on processing BEE certifications, from the point of acquiring a client(sales) to issuing the certificate. The system promotes “green IT” and saves costs by minimising paper usage.
11	<b>Young Einsteins</b>	Team Young Einsteins created a revolutionary approach for distance education for a company called Young Einsteins. The system includes a dynamic interactive website which increases user activity and a desktop application for administration purposes.

12	<b>C.T.P.S (Computer Technology and Programming Solutions)</b>	A GPS tracking system composed of a website, desktop and android application that allows the Metrobus commuters to be aware of the location and status of any bus.
13	<b>Dynamic Solutions</b>	An electronic traffic ticket management system, aimed at providing an efficient and convenient way of issuing, managing, and viewing traffic infringements. It also authenticates existing driver and vehicle particulars.
14	<b>NNJS</b>	The Bula Records website allows up and coming artists to share their music with music enthusiasts. Artists can gauge their popularity from listener ratings, and stand a chance of getting a contract with Bula records.
15	<b>TransIT</b>	A train management system that ensures maximum benefit is derived from all assets involved in the logistical process. Reports draw ones attention to things such as: asset usage, routes travelled and frequency of part replacements.
16	<b>Green Int.</b>	The Young Designers Portal gives young talented designers the platform to sell and advertise their products to a wide array of customers. Customers can browse catalogues, rate/review designers and buy products. Designers can use the ratings/ reviews to improve their product designs.

17	<b>Encrypted Minds</b>	RestaurantFind.ZA is a local food store locator. Using either the website or mobile application, users can search for restaurants that satisfy their dietary requirements, get directions to the restaurants (with GPS guidance), review and rate restaurants.
18	<b>The Binary Brotherhood</b>	CADMan is an application which manages all aspects relating to the creation and management of AutoCAD drawings as well as offering detailed reporting features to make informed decisions pertaining to the services provided.
19	<b>M.I.L.K</b>	TravelMATE Johannesburg is an integrated GPS application that revolutionises and improves the travel experience of the commuter. It has features such as using hand signs to indicate desired destinations and providing navigation through Johannesburg.
20	<b>Co Synergy</b>	Our approach provides e-commerce and mobile trading applications, which allow customers and traders to engage and trade various foreign currencies offered by a bank over a single, common and accessible platform.
21	<b>IT Incredibles</b>	We have developed a promotion management system for a marketing company called Brandsrock group. The system is a website which enables the clients, the promoters, the administrators and the mystery shoppers to interact online.
22	<b>Enigma-IT</b>	An enhanced transport management solution providing fleet management, route planning and scheduling, booking control and a fully automated company backend.

23	<b>Bothhale Software Solutions</b>	A public transport management system which improves how the Department of Public Transport manages public transport by centralising communication between themselves and service providers. It also informs commuters about the availability of public transport.
24	<b>LMTJ IT Solutions</b>	Our system is a web-based conference management system that helps to manage multiple scientific conferences. We have included functionalities such as creation of multiple conferences, watching conference videos, selection of food preferences and reports.
25	<b>DominoFlux - breaking the walls of IT</b>	DominoFlux: Nothing brings a solution together better than the right team! We have developed the DominoFlux Workflow Allocation and Attendance system, which deals with allocating work schedules and clocking employees in/out via a fingerprint reader.
26	<b>Hyper Software Solutions (HSS)</b>	Asset management system that helps the company's management to keep track of assets, improve accountability of personnel and help with the decision making relating to resource allocations.
27	<b>D-Buggers</b>	Touradvisor is a tourism management system with a focus on Johannesburg. It is designed for tourists to plan trips, review and rate the attraction sites they visit. Statistics are then formulated based on the data gathered.

28	<b>HighLanders</b>	We provide a platform that allows clients to purchase and sell land sites at competitive prices. We offer reliable services that help you save time and money when buying land sites
29	<b>Innov8Tech</b>	Innovate Tech is developing an auction website that auctions different types of books. The website supports two types of auctions, namely English and Dutch auctions. Customers bid according to the specific auction rules.
30	<b>Dynamic Vision</b>	The Eezy Watts system was created to help the average person manage their electricity consumption more efficiently. The system promotes a culture of saving and allows people to keep track of their household energy consumption.
31	<b>Legacy Coders</b>	The system Procute was developed for the orthopaedic department at the Helen Joseph Hospital. Procute manages, keeps track of and provides reports on all the patients treated and departmental costs incurred during their treatment.
32	<b>Think Different</b>	Gustare - A Restaurant Experience System. Our system removes all the hassle associated with the conventional dining experience and replaces it with a seamless, connected and social journey from ordering your meal to paying for it!

33	<b>Intellect</b>	Our system is a Smart Inventory Warehouse Management System that regulates package allocation, does automated worker task allocations and provides user management. Customers are informed of their packages' status and management can create comprehensive
34	<b>Apache</b>	An ordering solution intended for the Klevas Clothing Company allowing sales representatives to efficiently manage their clients. Keeping track of warehouse stock and sales trends, Klevas management can now make effective and informed deci-
35	<b>Cloud9</b>	Tingo searches, renders and consolidates data found in the public domain (Internet) into an easy to use format. This provides the user with contextual knowledge about their clients, prospects or competitors. All this, in turn, allows the client to make informed decisions.
36	<b>TSN Group</b>	The SASCO (South African Student Congress) Student Management System simplifies the registration process of the organisation. Committee members can easily communicate with members within a specific branch while keeping an overview of the entire organisation.
37	<b>.exe</b>	InterCrypt is a custom desktop solution that manages encrypted files stored on a remote server. Intended for corporate use, it provides transparent and secure access to confidential information from employees' computers.

38	<b>Sprint Systems</b>	The project provides a clinic management system that is able to manage patient appointments and files. It also manages and tracks medicine stock levels and the occurrences of diseases.
39	<b>Afri-Tech</b>	Afri-Property is a real-estate system where users register either as a lessors or lessees. Lessors register properties whereas lessees can search for properties, add-favourites and receive notifications if there are matches. Management view reports.
40	<b>The iTeam</b>	Our project is an Online Application System for UJ's Student Enrolment Centre. It includes a website where students can complete and submit applications online as well as a desktop application where administrators process these applications.
41	<b>Quadbuster</b>	An ISO9000 Quality Management System to keep track of the quality of projects during development. The system will ensure that projects follow predefined steps in a set time frame. This will be achieved through regular reviews, solid security and efficient data storage.
42	<b>Omega</b>	Deleting The Wallet will completely replace your wallet with your mobile phone! Your phone will carry all of your receipts, loyalty cards, cash and much more! Secure purchases are made by simply swiping your phone!

43	<b>PJTS Tech</b>	Power-Log is a web based system which reduces the electricity usage of South Africa, by analysing the electricity consumption for each registered household user. It also provides the statistics on electricity usage for each suburb, city and province.
44	<b>Team ANIM</b>	Our system revolutionises restaurants by providing a smartphone on each table to speed up customer orders and payments. This is complemented with in-depth reporting for the manager, facial recognition for staff clock-in, and support for all major operating systems.
45	<b>IT INNOVATIONS</b>	Our system is a project scheduling system for cleaning projects. The system manages resources and employees on the projects and also deals with the day-to-day running of the cleaning projects.

# Honour Projects

Client Puzzle DOS Prevention	Crockett , MT
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In the prevention of DOS attacks, there are many possible solutions, for my project i have decided on prevention by making use of client puzzles.

Object Training and Detection	de Villers , JJ
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An image processing application that when given a set of positive training examples of a specific object, can build a descriptor to describe the object and consequently use the descriptor to detect instances of the object in unseen image stills and video sequences.

Multiple level SCADA security system	Dunlop , D
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This project looks at applying a general multi-level security interface to protect Supervisory control and data acquisition (SCADA) systems from modern threats.

Cody - A Robot Guide Dog Prototype - Obstacle Detection & Voice Command Processing	Franks , RC
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A robotic guide dog has been developed with the ability to accept voice commands and aid in the assistance of a blind user by detecting obstacles, navigating through an area & updating the blind user on environmental changes.

Facebook Security Scanner	Gerber , R
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Allows social media site users to evaluate their security settings. The application logs into Facebook on behalf of the user and performs an analysis of their settings. These settings are then used to generate a report that will assist the user in adjusting insecure settings.

Steganography	Hassen , A
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A system that explores techniques in achieving steganography, which is a form of data hiding that is undetectable to a human observer.

Electric Wise	Hon , SR
Simulating the human behaviour of families in their electrical consumption and the impact of smart grid technologies	

Prescription Issuing System	Kaira , JC
This solution system addresses the issue of forging prescriptions by patients. The solution allows automated reading and writing of prescriptions. It makes use of QR-Codes (Quick-Read codes) for writing the prescription. This prevents patients from modifying the prescription document and makes it impossible for them to forge doctors' signatures. The solution also makes use of encryption algorithm to ensure the integrity of the prescription is maintained in transit.	

Smart Parking for the University of Johannesburg	Kgaladi , LK
A parking system that can suggest parking spaces by learning from drivers' parking behaviours	

Sustainable Harvesting	Louw , C
Effects of deforestation and poor environmental resource planning are quickly identified by making use of linear growth forecast models to prevent environmental collapse and encourage habits of sustainable resource utilisation and replenishment.	

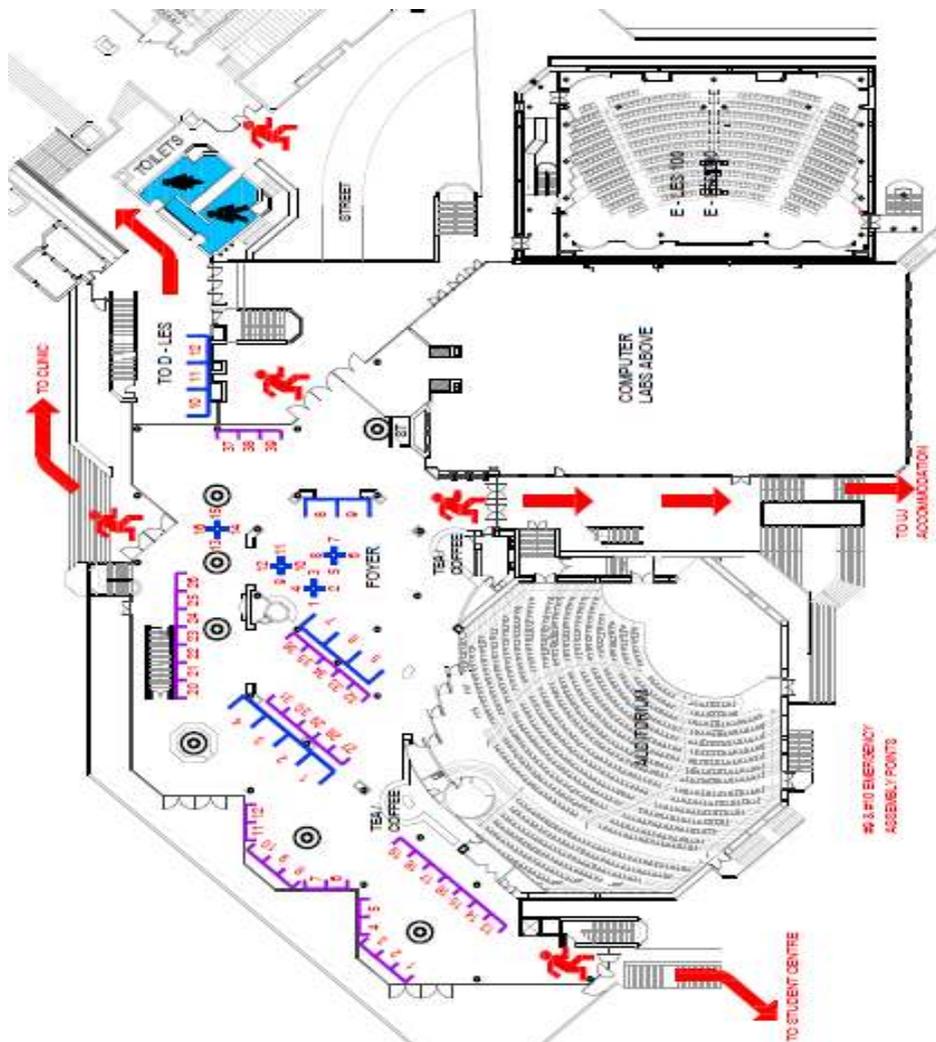
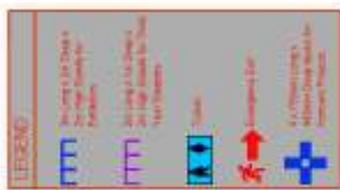
Financial Model Builder	Mphuthi , TD
A system that analyses a financial instrument over a short period of time in order to predict the future of the financial instrument as well as build a mathematical model of the financial instrument over a period of time, the aim to assist in short term trading of CFDs.	

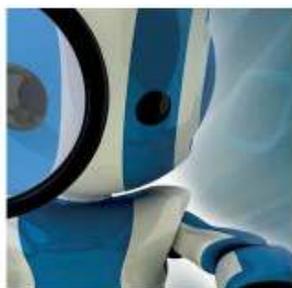
Applied Emotion Recognition System	Sampson , T
User interfaces have evolved to the point where our interactions with computers may include touch, sound, movement and emotion. AERS demonstrates how Natural User Interfaces can be used for real life application.	

	Thanthony , N
<p>This project makes use of a quadrotor to automatically navigate an environment for the purposes of exploration. This project aims to aid in the exploration of an area for search and rescue efforts.</p>	

Preference monitoring system	Zulu , ZM
<p>The preference system aims to counter common fraud on the internet banking platform, by giving users the ability to predetermine the limitations entailed in their financial transactions. This system focuses on three groups of parameters that will be set by the user that will be monitored by it system namely: Financial preferences, Location based preferences and Date/Time specific preferences. The system monitors financials performed and validates them against the limitations specified in each preference within the preference groups.</p>	

Expert Finding	Swartz , SB
<p>A software system that automatically identifies and categorizes experts, thus enabling users to easily find knowledgeable individuals. The Expert Finder also allows company officials (i.e. CEO's) to use centrality measures to identify all the key employees within an organization.</p>	





Dit is vir ons aangenaam om u hartlik uit te nooi na die  
26<sup>ste</sup> Akademie vir Rekenaarwetenskap en  
Programmatuuringenieurswese Projektedag.

It is our great pleasure to hereby cordially invite you  
to the 26<sup>th</sup> Academy of Computer Science and  
Software Engineering Projects Day.

**Datum/Date**

Woensdag 24 Oktober 2012 / Wednesday 24 October 2012

**Tyd/Time**

09:30 – 17:00

**Lokaal/Venue**

Universiteit van Johannesburg, Auckland Park Kingsway  
Kampus, Ouditorium / University of Johannesburg,  
Auckland Park Kingsway Campus, Auditorium

**Prysuitdeling/Awards Ceremony**

17:15 → 18:15 in die Ouditorium/ 17:15 → 18:15 in the Auditorium

**Skemerkerk/Evening Cocktails**

Onmiddellik na prysuitdeling in die Ouditorium Voorportaal/  
Directly after the awards ceremony in the Auditorium Foyer.