

# PROGRESS REPORT

## Annual Progress Report for the CSIR DSI-Interbursary Support (IBS) Programme

**October 2020**

All Masters and Doctoral students who are currently holders of the CSIR DSI-Interbursary Support (IBS) bursary should complete this Progress Report Template.

Please complete and submit this report by email to [HCD-INTERBURSARY@csir.co.za](mailto:HCD-INTERBURSARY@csir.co.za) by **20 October 2020**

**NB:** Incomplete reports will not be favourably considered.

### 1. Research Focus Area.

Select the focus area of your research from the list below - Remember this is already on your bursary allocation letter):

- Aerospace
- Composites
- Modelling and Digital Sciences
- Microsystems Technology
- Titanium (Manufacturing Elements)
- Photonics
- Biopharming
- Bioprocessing
- Biocatalysis
- **Information and Communications Technology**
- Indigenous Knowledge Systems (IKS)
- Health

### 2. Student Details.

<b>Student Name:</b>	Mawande
<b>Student Surname:</b>	Sikibi
<b>Student Number:</b>	201203976
<b>Student ID/Passport Number:</b>	9105156085084
<b>Student date of birth</b>	15 May 1991

Student's Email address	<a href="mailto:mawandesikibi@gmail.com">mawandesikibi@gmail.com</a>		
Student's contact numbers	0785351969		
Name of University:	University of Johannesburg		
Academic department:	Mechanical and Industrial Engineering Technology		
Degree registered for:	Masters		
Year when funding started	2020	Expected Year of Completion:	2020
How many years have you been receiving this bursary support for your current degree?	1		
Do you require extension funding for 2021?	Yes	No	
	X		
If yes, please provide reason why you require extension funding for 2021?	PHD study funding		
Name of Supervisor:	Rita Steenkamp		
Supervisor's Email address:	rsteenkamp@uj.ac.za		
Supervisor's contact numbers:	011 559 6278		

### 3. Project Information.

Research Title:
Use big data analytics for management of production

Summary:
<p>Nowadays, data is indispensable in the production industry sector. Big data analytics and initiatives are used to gain insights that could assist to make strategic decisions to evaluate this data. The concept connects to Industry 4.0, which emerged at the commerce of the 21st century. Technology giants can use big data analytics technologies to forecast future outcomes. For the large volume of data and voluminous databases that can be structured, semi-structured, or unstructured, the term big data is widely used for a plethora of advanced digital techniques designed to reveal trends. This study aims to use big data analytics for management to predict future outcomes. However, these analytics examines the large data sets of production processes to underline insights and patterns. The study uses an intrinsic case study to better understand the methods used to extract the database's data to achieve superior results. The researcher participated in the process in an active participatory manner and demonstrated to the company the use of predictive analytics to predict and analyse big data from various big data sets to gain insights and patterns. These methods managed to use historical data and turn it into actionable information about what may happen. The</p>

results obtained from historical data assisted production management in making strategic decisions in the selected data sets. This study proposes predictive analytic as the method for big data to predict the future conditions that drive the production industry.

**Progress on work done for each objective:**

**This study conceives to address the fundamental questions: Does the company understand how to manage big data analytics?**

The involvement of researchers in the sector has changed the mindset around data storage. This skill set has altered how management handles multiple generated data. It appears that the organization has adopted a new climate. The participation of the researcher in the company has changed the mentality regarding storing data. However, this skill set has changed how the management manages various data generated. The company appears that has brought a new environment. The knowledge of how to use this technique has changed the management perception towards managing big data. This was important to the company.

**What is the analytical technique that would be suitable for managing big data?**

This technique has leveraged the production data to the extent that the management can predict company data. Therefore, this has created many opportunities in the company for job opportunities that are related to data.

**How would the company govern the data and change the future data outcome?**

The company has deployed data scientists to govern the data predicted for patterns and future occurrences.

**Research outputs (Report if there are any outputs to date including publications, manuscripts etc.). For all publications write in full using the Harvard Reference style guide.**

Use green initiatives for management of logistics industry

SAIIE31 Proceedings,  
5<sup>th</sup> – 7<sup>th</sup> October 2020,  
Muldersdrift, South Africa  
© 2020 SAIIE

\* SAIIE31 Award for best Panel Session

<https://conferences.sun.ac.za/index.php/saiie31/saiie31/author/submissionReview/4487>

Signature by student: M. Sikibi

Date: 19 October 2020

**Supervisor recommendations:**

**Has the student's progress been satisfactory? Please comment and report any other issues that you would like to bring to the attention of CSIR DSI Inter-bursary management.**

As lecturer for Industrial Engineering at the University of Johannesburg. Mr. Sikibi has been a dedicated student who has worked hard consistently he has completed his master's degree in industrial engineering at UJ and he is currently busy with his Masters. The topic of his masters in "Use big data analytics for management of production". This is a very relevant topic in line with fourth industrial revolution. He is a friendly and confident student. He attended his classes diligently and completed assignments on time. He makes the extra effort to ensure that he understands and provides lecturers with good quality work. He is a self-motivated student.

**In the case of extension funding request please provide your comments on this section.**

Please assist him with funding for PhD studies

Signature by supervisor: Rita (H.) Steenkamp

Date: 18 October 2020

**REPUBLIC OF SOUTH AFRICA**  
**NATIONAL IDENTITY CARD**

Surname:  
**SKIBI**  
Names:  
**MAWANDE**  
Sex:  
**M**  
Nationality:  
**RSA**  
Identity Number:  
**9105156085084**  
Date of Birth:  
**15 MAY 1991**  
Country of Birth:  
**RSA**  
Status:  
**CITIZEN**

Signature:

**SOUTH AFRICAN POLICE SERVICE**  
**CLIENT SERVICE CENTRE**  
**2020 -10- 06**  
**KATLEHONG NORTH**  
**SUID-AFRIKAANSE POLISIEDIENS**

Conditions:  
This card has been issued by the  
Department of Home Affairs in terms of the  
Identification Act, Act 68 of 1997  
If found please return to the Department of Home Affairs  
For enquiry or verification purposes contact 0800 80 11 80

Date of Issue:  
**05 OCT 2017**

**107138746**

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MAGSNUMMER  
FORCE NUMBER

NAAM IN DRUKSKRIF  
NAME IN PRINT

RANG  
RANK





Name	M H SIKIBI			Account number	2601868112	
Ward number	51	Payments until	2020/08/28	Vat Reg. No.		
Street address	149 149 HLAHANE			Electricity / Water deposit	Statement Date	
	Cash	0.00	Guarantee	0.00	2020/08/29	
Township	HLAHANE			Valuation	Total Value	
	Site	184000		Improvements	184000	
ERF Number	P52 000 00000149	Portion	00000 0000 0000	Area m2	216	
Date	Icon	Details		Charge (excluding VAT)	VAT	Charge (including VAT)
20/07/28		BALANCE BROUGHT FORWARD		1669.47		1669.47
		SUB TOTAL		1669.47		1669.47
<b>PROPERTY RATES</b>						
20/08/28		PROPERTY RATES RESIDENTIAL		161.31		161.31
20/08/28		VA-VALUE-EXCLUSION		-131.50		-131.50
<b>REFUSE REMOVAL</b>						
20/08/28		REFUSE: DOMESTIC 240L BIN		174.41	26.16	200.57
20/08/28		DISC - REFUSE REBATE		-26.16	-3.92	-30.08
<b>WATER SERVICE</b>						
20/08/28		METER-NO 191113565 TARIFF: WATER-RESIDENTIAL				
		Curr = 156 Prev = 139 Cons = 17				
		Reading dates: Curr 20/08/19 Prev 20/07/09				
		8 k1 PER MONTH FREE				
20/08/28		WATER 17 - 8 = 9 k1		307.44	46.12	353.56
		FREE UNITS WATER 8 k1		-109.11	-16.37	-125.48
<b>SEWERAGE</b>						
20/08/28		SEWER-RESIDE 17 k1		274.96	41.24	316.20
20/08/28		SE FREE UNITS 8 k1		-146.12	-21.92	-168.04
		TOTAL CURRENT LEVY 576.54				
<b>LINKED ACCOUNTS</b>						
		2NH - NORMAL HANDO MADHLOPA INCORPORA 19688.88		2612676435032	2020/08/3101	
30 Days	60 Days	90 Days	90+ Days	Total charge (excluding VAT)	Total VAT	Total charge (including VAT)
541.49	441.48	686.50	0.00	2174.70	71.31	2246.01
SEE REVERSE SIDE FOR IMPORTANT INFORMATION		Amount in advance	0.00	Due date	2020/09/24	Amount payable
						2247.00
Note that Electricity (5.93% - 8.76%) Water (15%) and Sanitation(11%) services tariffs increased with effect from 1 July 2020.						
Visit www.ekurhuleni.gov.za for detailed approved tariffs						



	0402	2601868112
>>>>>> 9 1339 2601 8681 128		
	44522601868112	115442601868112
	2601868112	

Name	M H SIKIBI	
Account number	2601868112	
Due date	2020/09/24	
Amount Payable	2247.00	



## FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

15 October 2020

MR M SKIBI  
149 HLAHANE SECTION  
KATLEHONG  
1431

YOUR REFERENCE NUMBER: **201203976**  
(must be used in all correspondence with UJ)

Dear MR SKIBI

Your application to **PhD in Industrial Engineering** that will be offered on **APK CAMPUS FULL-TIME** in the **FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT** on **APK Auckland Park Kingsway** for **2021** refers.

Thank you for your application to study at the University of Johannesburg. You have been **DOCTORATE CONDITIONALLY SELECT** for a **2 year PhD in Industrial Engineering** in the **FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT**. You will be commencing with your studies in January **2021** and you are expected to complete in December **2022**. With this letter, you may proceed with the study visa application. To avoid delays in the processing of your study visa application, it is advisable to apply immediately.

### ADMISSION STATUS VERIFICATION

Your admission status can be verified on the UJ website <https://student.uj.ac.za/status.aspx>. No notice regarding your admission status is official and binding on the University unless it has been sent by e-mail to you from the University's server or uploaded by the University to the aforesaid website.

### REGISTRATION

- Your registration dates will be communicated to you during November 2020. You need to ensure that you register within the specified registration period.
- Please be advised that due to space constraints, registration within the specified registration period is dependent on space availability.
- Registration dates can be found on the UJ website at [www.uj.ac.za](http://www.uj.ac.za) from December 2020.

**Please note** that all admitted International Applicants are required by the University to comply with the following requirements before registration can take place.

#### 1. STUDY VISA

- All registering International students that will be residing in the Republic of South Africa temporarily are required to provide a valid study visa issued in the name of the University of Johannesburg.
- In terms of the provisions of the South African Immigration Act No. 13 of 2002, Asylum Seekers and Refugees are required to register with a valid Asylum Seeker and Refugee permit.
- Diplomatic and Permanent Resident permit holders are exempted from the study visa requirements.

#### 2. MEDICAL AID COVER

- The Immigration Regulations requires proof of medical cover with a scheme registered and administered in the Republic in terms of the Medical Schemes Act, renewed annually for the period of study for registration purposes. For the list of all medical aid schemes registered in South Africa please visit <https://www.medicalschemes.com/MedicalSchemes.aspx>
- Asylum, Refugees and Permanent Residence permit holders are exempted from providing proof of medical aid cover.

### 3. FEES

Information on tuition and other fees due for 2021 will be available during November 2020. Please visit the UJ website at [www.uj.ac.za](http://www.uj.ac.za) for more information.

Banking details for payment of Tuition Fees:

University of Johannesburg Tuition Fee Account	
Bank	FNB
Branch Code	210 554
Account Number	626 158 73199
Swift Code	FIRNZ AJJ

Please quote only your student number as reference.

All privately (i.e. Self, Parent/s or Guardian) funded international students are required to pay their tuition and campus residence fees as follows:

- An upfront payment of 30% for tuition and campus residence fees must be paid before or at registration.
- 35% of the tuition and campus residence fees to be paid by 30 April.
- 35% of the tuition and campus residence fees to be paid by 31 July.

The University will offer a 5% discount should the full fees be paid before or at registration.

- All sponsored (Government, Organisation or Company) international students will need to provide a letter confirming the sponsorship.
- Asylum Seekers, Diplomatic, Permanent and Refugee permit holders are exempted from paying an international levy.

### ENGLISH PROFICIENCY TEST

All registering International students who have not studied in English are required to provide English Proficiency Test results. Only the following will be accepted: IELTS with an overall score of 7 and TOEFL at an average score of 105 – 120. Alternatively, you may elect to write the University of Johannesburg English Language Programme Test (UJELP).

### 4. IMMIGRATION UNDERTAKING

The University confirms that you will not be taking the place of a South African and undertakes to fully comply with applicable immigration laws of the Republic of South Africa:

- Provide proof of registration as contemplated in the relevant legislation within 60 days of registration; or
- In the event of failure to register by the closing date, provide the Director-General with a notification of failure to of registration; register within 7 days of the closing date
- Within 30 days of de-registration, notify the Director-General that the applicant is no longer registered with the University of Johannesburg; and
- Within 30 days of completion of studies, notify the Director-General when the applicant has completed his/her studies.

### RESIDENCE

If you have applied for admission to a residence, you will receive a separate letter in this regard. Contact numbers for residences are:

Kingsway Campus	+27 11 559 2092	Ladies' Residences
Kingsway Campus	+27 11 559 2863	Men's Residences
Bunting Road Campus	+27 11 559 1566	All Residences
Doornfontein Campus	+27 11 559 6552	All Residences
Soweto Campus	+27 11 559 5015	All Residences



## AGREEMENT AND INDEMNITY

- You will be required to complete, sign and submit a formal agreement (with the University of Johannesburg) when you register.
- The formal agreement includes terms exempting the University and persons for whose conduct it is responsible for and indemnifying them against liability arising from damages and losses you may suffer.
- If you are under the age of 18, a parent or guardian must sign the required form.
- You will be registered on the strict understanding that you agree to abide by the Student Charter rules, the Academic Regulations of the University of Johannesburg, the rules and regulations of the faculty and the policies and procedures of the University as amended from time to time.
- You undertake to pay the prescribed fees and accept that you are bound by the provisions of the formal agreement.

## DISCLAIMER

Where applicable, the University of Johannesburg reserves the right to review the admission or registration status of an applicant where an applicant did not:

- a) Indicate details of previous studies both current and prior to the application.
- b) Indicate the correct matric type at the time of application.
- c) Indicate any other relevant/correct information.
- d) Supply documentation that could have affected the decision process of the application.

All applications are subject to the University's rules, regulations, policies and practices, including the University's Policy on Admission and Selection.

We look forward to welcoming you in January 2021.

Yours sincerely,



Ms L Bobi

Faculty of Engineering and the Built Environment

E-mail: [febehd@uj.ac.za](mailto:febehd@uj.ac.za) (Masters and Doctoral)

[febepgassist@uj.ac.za](mailto:febepgassist@uj.ac.za) (Advanced Diploma, PGDip and Honours)

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University of Johannesburg  
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