Divyan Hirasen

Curriculum Vitae

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As a BSc Computer science Honours student at the University of KwaZulu-Natal – I am passionate, motivated and always looking for ways to expand my knowledge in my field of study. Furthermore, I am keen and always willing to take on new opportunities and responsibilities. I hope to finally affiliate myself with a company which offers enticing career growth opportunities, quality training, and which recognises my personal strengths and potential contributions.

Personal Traits

Self-Learning, Resourcefulness, Attention to detail, Curiosity, Grit, Approachable, Divergent Thinking, Problem Solving, Modesty, Time Management, Competitive, Strategist, Independent and Team-Orientated.

Interests

Systems Analysis and Information acquisition, Systems Design, Website design and implementation, Relational database designing, Computer programming, Self-learning, Adobe Photoshop, Adobe AfterEffects, Cinema4D, Gaming, CodeCademy, Television Series and Anime.

Computer skills

Programming Language	Java, Python, VB.Net, SQL, Julia
Familiar With	C++, C#, x8086 Assembly
Web Programming	HTML, Basic CSS and JS, ASP.NET, Bootstrap,
IDE	NetBeans, JGrasp, Eclipse, Visual Studio, CodeBlocks, Wingware, Atom, Brackets, VSCode, IntelliJ
Version Control	GitHub, GitKraken, Atom, VSCode
Other	Microsoft Office, Microsoft Visio, Microsoft SQL Server, Photoshop, AfterEffects, Basic GIT Bash/GUI, Basic VIM, Crystal Reporting

Education

2018-Now **BSc Honours Computer Science**

University of KwaZulu-Natal, Westville Campus

Modules:

Image Processing and Computer Vision, Cryptography & Network Security, BioInformatics, Ontologies and Knowledge Bases, Artificial Intelligence

Research:

Plant Species Identification using Local Binary Patterns

2015-2017 **BSc Computer Science and Information Systems**

University of KwaZulu-Natal, Westville Campus

Major 1: Computer Science

Introduction to Computer Science, Computer Programming, Foundations of CS, Object Orientated Programming, Data Structures, Computer Organisation and Architecture, Computer Systems, Advance Programming,

Major 2: Information Systems

IS&T Development Fundamentals, Systems Analysis & Design, Databases, Applied Systems Implementation, Advance Systems Analysis and design.

Other:

Calculus, Statistics, Linear Algebra, Discrete Mathematics and Applications, Microeconomics, Management, isiZulu

2003–2014 **National Senior Certificate**

Seatides Combined School, Seatides, Durban.

Subjects: English Home Language, Afrikaans First Additional Language, Mathematics, Life Orientations, Physics, Information Technology, Life Sciences

Clubs: Tonver Chess, Tonver Cricket

Awards and Honors

2018 **UKZN Scholarship Award**

Award made in recognition of academic performance upon completion of BSc Computer Science and Information Technology degree.

2018 **CSIR-DST Inter-Program Bursary Award**

Awarded to full-time students studying towards Honours, my focus area being Modelling and digital sciences (biometrics)

2017 **UKZN Deans Commendations**

+75% Aggregate for modules Artificial Intelligence, Theory of Computation, Networking and Database Management, Applied Systems Implementation 2

2016 **UKZN Deans Commendations**

+75% Aggregate for modules Object Orientated Programming, Systems Analysis and Design, Discrete Mathematics and Applications, Management.

2016 **Team Placed First-Place for ACM-ICPC Competition in KZN**

Team composing of 3 members participated in the ACM International Collegiate Programming Contest which is a multitier, team-based programming competition.

2015 - Now **Golden Key International Honor Society**

Awarded to top 15% of students in specific degree program.

2014 **5 Distinctions in Matric National Senior Certificate**

Mathematics 88%, Life Orientation 82%, Information Technology 95%, Life Sciences 80%, Physical Science 87%

Projects

2018 - Now **Honours Research**

Description: Plant Species Identification using Local Binary Patterns

Automatic plant species identification is an interesting and challenging problem and impacts important applications in many real-world areas. Deriving an effective plant species representation from the leaf images is a vital step for successful plant species identification. This research work aims to empirically evaluate plant species representation based on statistical local features, Local Binary Patterns, and geometric features. Furthermore, the statistical local features can be investigated or explored thoroughly on how to extract the most discriminant features through boosted-LBP and boosted-LDP.

Aim: To investigate robust local feature extraction techniques that can accurately identify plant species.

Outcome: Accurate identification of plant species using a computer vision processing system based on optimum feature extraction methods

Development Environment:

Development Language: Java and OpenCV library

Development IDE: Eclipse, VS Code

2017 - Now **Side Project (Website Collaboration)**

Description: Timeline of projects completed throughout degree

Members: Divyan Hirasen, Verosha Pillay

A website which displays and tracks all projects and work completed/in progress from the commencement of our degrees. The website also showcases the tracking of our Honours research project and any mini projects given throughout the course of the year.(2018)

Development Environment:

Development Language: HTML, CSS, JS

Development IDE: VS Code

Database Server: GitHub Hosted Pages

2017 **Information Systems Final Year Project**

Client: Xtreme Nutrition, Chatsworth,

The intention of this group project is to find a company and begin to do data gathering and systems analysis on its current business processes and try to determine any shortcomings of their current Front-End System. Thereafter create a tailored Front-End System which specifically suits all old and any new business needs. Secondly, to implement a Web Based System for the company to allow online access for employees and customers.

Development Environment:

Development Language: Visual Basic.Net

Development IDE: Visual Studio 2010

Database Server: SQL Server 2014

Database Client: SQL Server 2014 Management Studio

2014 **Matric Information Technology Practical Assessment Task**,

Topic: Rhino Conservation System

A year-long individual major assessment used to test requirements gathering, relational database design, user interface design and implementation of a system used to track Rhino's in a conservation area

Development Environment:

Development IDE: NetBeans

Development Language: Java

Database Client: Java Derby Database