Chathura Widanage

CONTACT INFORMATION

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RESEARCH INTERESTS

Cloud Computing, Distributed Computing, Computer Vision

EDUCATION

B. Sc. (Hons.), Computer Science and Engineering
University of Moratuwa, Sri Lanka
- Obtained a First Class Honours with a GPA of 3.9 out of 4.2
- Secured a position at the top 10 of the field.

Oracle Certified Professional, Java SE
Oracle University
- Scored 96 out of 100

RESEARCH EXPERIENCE

Research and Development Project - CS4202   Feb 2016 - Apr 2017
This is the main research component completed during the undergraduate period. Project was to extend Helium to support non linear image filters. Helium is a tool for lifting stencil code from stripped x86 binaries to Halide DSL code. Capability to lift stencil code for basic non linear filters such as, twirl filter, fish eye filter and polar filter were added during this research. Research was supervised by Prof. Saman Amarasinghe(MIT, Cambridge, MA), Prof. Sanath Jayasena (Unviersity of Moratuwa, Sri Lanka) and Mr. Charith Mendis (MIT, Cambridge, MA).

TEACHING EXPERIENCE

Visiting Instructor - CS3042 Database Management Systems   Oct 2016 to Jan 2017
Department of Computer Science and Engineering
University of Moratuwa

PROFESSIONAL EXPERIENCE

Software Engineer, Adroitlogic Lanka Pvt Ltd   Apr 2017 - Now
At Adroitlogic I mainly focused on following R&D projects,
- KachE : A high performance in memory java cache.
- Adroitlogic Data Mapper : Project manager of GUI based data mapping tool which is capable of manipulating data from various sources such as CSV, JSON, XML, Relational data bases.
- Sigma : A cloud IDE(Saas) for developing, automated version controlling and deploying of server-less applications.

Software Engineer & Consultant, Health Information Systems Program, Presidential Secretariat, Sri Lanka   April 2016 - December 2017
Developing data analysis web and mobile tools to monitor nutrition related issues of children, which makes decision making process streamlined for medical health professionals to address nutrition problems of the country.

Software Engineering Intern, Adroitlogic Lanka Pvt Ltd   Oct 2015 to Apr 2016
I was a core initial team member of Adroitlogic IPS, which is a PaaS solution which can automatically deploy, manage and monitor hundreds of ESBs on hundreds of machines with few mouse clicks.

COMPETITIONS **AngelHack Colombo 2016** - Runners-up
Organized by: angelhack.com — Dialog Ideamart
Developed an open source disaster response system.
Github: https://github.com/chathurawidanage/suraksha

Augmented Human Conference 2016, Geneva - Top 10 student designs
Organized by: University of Geneva, Switzerland
Designed & Developed Sense, a wearable device which connects people with similar interests

Morahack 2.0 - Runners-up
Organized by: University of Moratuwa, Sri Lanka
Developed a smart wearable device "Spandha" to track elderly people

ExtremeCS 1.0 - Winners
Organized by: ACM Student Chapter
Algorithmic Challenge similar to IEEE Extreme programming challenge

ACES Coders V5.0 - Runners-up
Organized by: University of Peradeniya, Sri Lanka
Algorithmic Challenge similar to IEEE Extreme programming challenge

Google I/O Extended Hackathon - Winners
Organized by: Google Sri Lanka, Dialog Axiata
Designed & Developed Sense, a wearable device which connects people with similar interests

Fugosticka 2.0 - 2nd Runners-up
Organized by: AIESEC, Sri Lanka
Developed the mobile game Gravitron Quest, which is based on laws of physics

Ideamart Code Ultimum - Winners
Organized by: Ideamart, Dialog Axiata
Developed a location based social network which can be accessed even via a feature phone

IEEE Extreme Programming Challenge
- World rank 153 & Sri Lankan rank 6 in round 9.0
- World rank 224 & Sri Lankan rank 22 in round 8.0

ACHIEVEMENTS
- Migara Ranathunga Trust Award for best Computer Engineering Intern of all technical universities of Sri Lanka.
- Presented at 24th Commonwealth Medical Conference as the technical resource person representing DHIS2, Norway & HISP, Sri Lanka.
- Included in the Deans List of the faculty in 2nd, 3rd, 5th, 7th and 8th semesters.
- Recognition Award, Awards Ceremony, 2015, University of Moratuwa for non-academic achievements as an undergraduate.
- Best all-round Student, Maliyadeva College, 2008, Sri Lanka.
- Best Chess Player, Colors Awarding Ceremony, 2005, Maliyadeva College, Sri lanka.
- All island best chess player, (2005,2006), Chess Federation of Sri Lanka.

PROJECTS

Google Summer of Code 2016
Added the capability of creating and viewing longitudinal charts of tracked entity instances of DHIS2 tracker platform.
Organization: DHIS2
Technologies : Angular JS, HTML, CSS, ForerunnerDB, Java, Spring, Hibernate
Link: https://github.com/chathurawidanage/dhis2-tracker-longitudinal-charts

Nutrition Monitoring System
Application to monitor nutrition status of children at district level. Doctors, medical sisters and midwives are the end users of this application.
Technologies : Android, Java, Spring, Maven, Hibernate, Angular JS, HTML, CSS
Production Instance: http://dhis.pgim.cmb.ac.lk/nss/
Web App Source: https://github.com/chathurawidanage/dnms
Mobile App Source : https://bitbucket.org/widanage/dnms-mobile

Sigma, an IDE for server-less development
Saas which delivers a full featured cloud IDE to develop server-less applications and deploy them instantly in cloud vendors such as AWS.
Technologies : AWS, React JS, Javascript, HTML, CSS

Suraksha, open source disaster response platform
Platform is capable of managing disaster response centers, communicate their needs with public. People can use this platform to donate and help disaster response centers, lookup people in the disaster response centers by using facial recognition technologies.
Technologies : Java, MySQL, Spring, Hibernate, Angular JS, Computer Vision

Seeds, the location based social network
This social netowrk can be accessed by feature phones via SMS or USSD. User can plant a seed (tweet) at a location and anyone who is within 5km can read those seeds. Users can water (like) seeds planted by others. Seeds wont survive if not watered adequately. Technologies : Dialog Ideamart APIs, PHP, MySQL, Linux

Sense The smart band which connects you
Sense is a WiFi enabled wearable hand band which is always connected to the users facebook account. Matches people based on their likes, interests and recent activities.
Technologies : PHP, Android, Lua, Facebook API, ESP8266, NodeMCU, MySQL

Gravitron Quest a game which challenges the gravity
An android game where player have to use the concepts of gravity to move a spaceship without hitting the obstacles. Technologies : Android, libGdx Engine, Java

BearCare
A web site which connects parents to clean and safe day cares. Day care owners can update their pages. Parents can find closest daycares by zip code. Service available only in USA.
Technologies : PHP, Laravel, MySQL, Angular JS
Production Instance: http://bearcare.co/

Spandha, a wearable health device
A wearable health device which can be used to keep track of the health of elderly people. Device is capable of monitoring heartbeat and body temperature continuously. Detects if person falls and sends a SMS alert to a pre-saved mobile phone.
Technologies : Arduino, Java, MySQL, Ideamart APIs

Multi modal Self Driving Autonomous Car
The car has the ability to avoid the obstacles and travel on a road by detecting lanes. Three different algorithms are used for lane detection, that suites three different road conditions. (High ways, Noisy roads, Indoor roads).
Technologies : OpenCV, java, Rasberry Pi, node js, Arduino

REFERENCES

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Sri Lanka

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Health Informatics Society of Sri Lanka   Email: ceo@hissl.lk

DECLARATION I hereby certify that the above information about me, are true and correct according to the best of my knowledge.

Date: 31/01/2018   Chathura Dasun Widanage