



GEB. 27.04.1993 IN
BOGOTÁ



DILLAM-DIAZ



AM ERLANGER WEG 12A
91052 ERLANGEN



DILLAM.CA



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+49 178 18 869 01

DILLAM DIAZ

M.Sc. Computing Science

Überblick

- Masterstudent in Informatik an der University of Alberta, Edmonton, Kanada (voraussichtlicher Abschluss 15. August 2019)
- Entwicklung von Studien zur Untersuchung des Einsatzes von tragbaren Sensoren und Algorithmen für maschinelles Lernen zur Aktivitätserkennung in Wohnumgebungen und zur Erkennung von User-Engagement und kognitiven Funktionen beim Spielen von Rehabilitationsspielen
- Fundierte Berufserfahrung in Forschung, Engineering und im Projektmanagement

Bildungslaufbahn

University of Alberta

M.Sc. in Informatik

September 2017 – heute

- Thema der Masterarbeit: 'Measuring engagement and cognitive function by using biosignal and wearable devices'
- Aktivitätserkennung mit Machine Learning.
- Internet of Things
- Forschung zur Anwendung und Verarbeitung von Biosignalen und Machine Learning

University of Rosario und Colombian School of Engineering (Electrical Eng.)

B.Eng. in Biomedical Engineering

September 2011 – März 2017

- Diplom mit Auszeichnung (eingestuft als zehntbester von 20,000 Studenten)
- Abgeschlossenes Internationales Forschungsprogramm in Kooperation mit der *University of Alberta* (Kanada)
- Abgeschlossenes Austauschprogramm am Bournemouth and Poole College (England)

Berufserfahrung

Robert Bosch GmbH

Computer Systems (Praktikum)

Deutschland

Januar 2019 – heute (bis voraussichtlich zum 31.07.2019)

- Analyse zur selbstfahrenden Datenverarbeitung und Anwendung von Machine Learning
- Testen und Benchmarking von Machine Learning Algorithmen
- Machine Learning Evaluation für verbundene Dienste
- Data science und cloud computing

University of Alberta

Wissenschaftliche Hilfskraft und Übungsleiter, Department Informatik

Kanada

Januar 2017 – Dezember 2018

- Ausführung und Analyse von Bio-Signalen (u. a. EMG, EEG, EOG, Spracherkennung), welche über tragbare Sensoren aufgenommen wurden
- Koordination von Sensor-Fusion Projekten
- Übungsleiter in Programmieren und im Erstellen von Apps
- Mitglied in einem Team zur Untersuchung und Optimierung von Signalverarbeitungs-Methoden
- Umsetzung von Modellen für Deep Learning und Machine Learning für menschliche Aktivitätserkennung

The Rec Room

Chefkoch

Kanada

Februar 2018 – Dezember 2018

- Koordination des Personals und Planung der zeitgerechten Zubereitung aller Mahlzeiten
- Sicherstellung, dass die richtigen Mengen für den täglichen Bedarf bestellt werden

Sodiacero (Stahlproduktionsunternehmen)

Operations Manager

Kolumbien

April – Dezember 2016

- Koordination von Programmierung, Design und Produktion
- Projektplanung und Ausführung von Risikoanalysen und Qualitätskontrollen
- Analyse von Projektanfragen des Managements zur Identifizierung von Projektzielen und Aufgaben
- Nutzung von Autoencodern für Maschinensteuerung

Publikationen und Präsentationen

Sensor-enabled Functional-Mobility Assessment: An Exploratory Investigation

“The 2019 IEEE 5th World Forum on Internet of Things (WF-IoT 2019)” (Paper)

April 2019

AGE-WELL Annual Conference

“A practical EOG Device Activity + Emotion” (Wissenschaftlicher Vortrag)

Oktober 2018

AI Summer Program Talk

“Introduction to the internet of things and Real applications” (Präsentation)

Juli 2018

IEEE International Conference on Pervasive Computing and Communications

“Activity Classification in Independent Living Environment with Jins MEME Eyewear” (Paper)

März 2018

Iberoamerican Congress in Assistive Technology

“Toolkits for Assessment and Intervention of the Cognitive Function in Older with Dementia” (Präsentation)

November 2017

Scientific and Educational Meeting of the Canadian Association of Gerontology

“Measuring Emotions Using Emotiv Epoc+ While Playing Serious Games” (Präsentation)

Oktober 2017

Referenzen

- Julio Borges | Product Development | Bosch Engineering GmbH, Germany | julio.borges@de.bosch.com
- Prof. Eleni Stroulia | Department of Computing Science | University of Alberta, Canada | stroulia@ualberta.ca
- Antonio Miguel Cruz | Department of Occupational Therapy | University of Alberta, Canada | miguelcr@ualberta.ca

Sprachen

- Englisch: verhandlungssicher (C1)
- Spanisch: Muttersprache
- Deutsch: Grundkenntnisse

Computerkenntnisse

- Expert: Python, scikit-learn, SPARK, Matlab, Microframework
- Advanced: ROS, Tensorflow, Keras, Pandas, Java, C#, SQL, Linux
- Basic: C++, 3D Slicer, Docker, Build System, Flask, Bash, PyTorch, Django, .NET

Interessen & Hobbys

- seit 2015: Capoeira in Kolumbien und in England
- 2015: Tanzlehrer für Latin Dance in Kolumbien und in England
- 2014-2015: Zumba Instructor in Bogotá, Kolumbien





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Summary

- Student pursuing a Master's degree in Computing Science (anticipated date of graduation: 15th August, 2019)
- Developed studies investigating the use of wearable sensors and machine learning algorithms for activity recognition in home environments and detection of user engagement and cognitive function while playing rehabilitative games
- Breadth of professional work experience in research, engineering, project management

Education

University of Alberta

M.Sc. in Computing Science

September 2017 – Present

- Thesis project: Measuring engagement and cognitive function by using biosignals and wearable devices
- Activity recognition using Machine Learning.
- Internet of Things
- Researched bio-signal processing and Machine Learning applications

University of Rosario and Colombian School of Engineering (Based on Electrical Eng.)

B.Eng. in Biomedical Engineering

September 2011 – March 2017

- Graduated with honors (ranked 10th out of 20,000 students)
- Completed international research program in partnership with the University of Alberta
- Completed exchange program at Bournemouth and Poole college

Work Experience

Robert Bosch GmbH

Computer Systems (internship)

Germany

January 2019 – Present (termination of employment: 31st July, 2019)

- Researched self-driving Data Processing and Machine Learning applications
- Testing and benchmarking of Machine Learning algorithms
- Machine Learning Evaluation for connected services
- Data science and cloud computing.

University of Alberta

Research and Teaching Assistant, Department of Computing Science

Canada

January 2017 – December 2018

- Performed and analyzed bio-signals (e.g. EMG, EEG, EOG, speech recognition) collected from wearable sensors
- Coordinated sensor fusion projects
- Mentored young adults in programming and building apps
- Worked within a team to explore and improve signal processing methods
- Implemented Deep Learning and Machine Learning models for human activity recognition

The Rec Room

Lead Cook

Canada

February 2018 – December 2018

- Coordination of staff and planning timely preparation of all meals
- Ensure that the correct quantities are ordered to meet daily needs

Sodiacero (Steel Production Company)

Operations Manager

Colombia

April – December 2016

- Coordinated programming, design and engineering on steel production
- Planned projects and performed risk analysis and quality control
- Analyze project requests from management to identify project goals and objectives
- Using autoencoders for machine control.

Publications and Presentations

Sensor-enabled Functional-Mobility Assessment: An Exploratory Investigation

"The 2019 IEEE 5th World Forum on Internet of Things (WF-IoT 2019)" (*Paper*)

April 2019

AGE-WELL Annual Conference

"A practical EOG Device Activity + Emotion" (*Scientific talk*)

October 2018

AI Summer Program Talk

"Introduction to the internet of things and Real applications" (*Presentation*)

July 2018

IEEE International Conference on Pervasive Computing and Communications

"Activity Classification in Independent Living Environment with Jins MEME Eyewear" (*Paper*)

March 2018

Iberoamerican Congress in Assistive Technology

"Toolkits for Assessment and Intervention of the Cognitive Function in Older with Dementia" (*Presentation*)

November 2017

Scientific and Educational Meeting of the Canadian Association of Gerontology

"Measuring Emotions Using Emotiv Epoc+ While Playing Serious Games" (*Presentation*)

October 2017

References

- Stefan Manzer | Project Leader | Robert Bosch GmbH, Germany | Stefan.Manzer@de.bosch.com
- Julio Borges | Product Development | Robert Bosch GmbH, Germany | julio.borges@de.bosch.com
- Prof. Eleni Stroulia | Department of Computing Science | University of Alberta, Canada | stroulia@ualberta.ca

Languages

- English: near native (C1)
- Spanish: native speaker
- German: basic communication skills / working knowledge

Computer Skills

- Expert: Python, scikit-learn, SPARK, Matlab, Microframework
- Advanced: ROS, Tensorflow, Keras, Pandas, Java, C#, SQL, Linux
- Basic: C++, 3D Slicer, Build System, Flask, Bash, PyTorch, Django, .NET

Interests

- since 2015: Capoeira in Colombia and in England
- in 2015: Dancing instructor for Latin Dance in Colombia and in England
- 2014-2015: Zumba Instructor in Bogotá, Colombia

