Bojan Gavrilovic

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HIGHLIGHTS OF QUALIFICATIONS

- Experience in software development (MATLAB, Java, C, R)
- Experience in web development (HTML, CSS)
- 3+ years of experience in time series data analysis of physiological signals
- Developed and published predictive models using clinical data sets
- Management and people skills gained from collaborating with industrial and research partners

EXPERIENCE

TORONTO REHABILITATION INSTITUTE | Research Engineer

2016 – Present | Toronto, ON

- Designed, developed and validated machine learning model for a wearable device to diagnose sleep apnea in collaboration with BresoTEC Inc
- Designed and prototyped portable bioelectrical impedance system and integrated our design with smart textiles developed by Myant Inc.
- Developed statistical analysis methods for clinical trial that met all FDA requirements for a diagnostic medical device
- Secured over $300,000.00 in funding for the development of new technologies in our lab.
- Successfully managed $1M project to develop the world first sound proof sleep laboratory
- Designed, fabricated, and assembled equipment and instruments that require the identification, modification, and adaptation of novel engineering techniques

TORONTO REHABILITATION INSTITUTE | Research Student

Expected Sept 2014 – Aug 2016 | Toronto, ON

- Designed and tested system to measure intra- and extra-cellular fluid in humans using bioelectrical impedance spectroscopy
- Published a multi-variate regression model for predicting risk of fluid related sleep apnea in the journal of Sleep Medicine

THE HOSPITAL FOR SICK CHILDREN | Software & Hardware Developer Intern

2016 – 2017 | Toronto, ON

- Developed, prototyped and tested simulator for laparoscopic surgery
- Designed statistical models to differentiate novice surgeons from expert surgeons
- Wrote and published technical document outlining the design of the simulator

THE HOSPITAL FOR SICK CHILDREN | Research Student

May 2015 – Sept 2015 | Toronto, ON

- Analyzed EEG data on children suffering from traumatic brain injury and published results
- Developed software to perform connectivity analysis on EEG data

TECHNICAL SKILLS

- Experienced working with oscilloscopes and multi-meters
- PCB design with Eagle
- Familiar with Solid Works
- Experienced with Java, MATLAB, R, C, SAS
- Experienced with hardware communication protocols (SPI, I2C, and UART)
- Familiar with Python and SQL
- Version control experience with GIT and SVN

EDUCATION

UNIVERSITY OF TORONTO | MHSc, Clinical Engineering
Completed Aug 2016 | Toronto, ON

MCMASTER UNIVERSITY | BEng in Electrical Engineering
Conc. in Biomedical Engineering, | Completed April 2014 | Hamilton, ON
Graduated with Distinction (Summa Cum Laude)

RELEVANT COURSES

- Graduate level statistical analysis and design of experiments
- Digital Signal Processing
- Web Development (Currently Enrolled)

PUBLICATIONS

Bojan Gavrilovic MHSc, Aodhnait S Fahy BMBCh PhD, Brian, Carrillo PhD, Ahmed Nasr MSc MD, Justin T Gerstle MD, Georges Azzie MD. (2018). Development of an open-source laparoscopic simulator capable of motion and force assessment: High tech at low cost. Journal of Laparoendoscopic & Advanced Surgical Techniques.

Aodhnait S Fahy, Kai-Ho Fok, Bojan Gavrilovic, Monica Farcas, Brian Carrillo, Justin T. Gerstle, Georges Azzie. (2018). The impact of simulator size on forces generated in the performance of a defined intracorporeal suturing task: a pilot study. Journal of Laparoendoscopic & Advanced Surgical Techniques.

Vena D, Bradley TD, Millar PJ, Floras JS, Rubianto J, Gavrilovic B, Perger E, Yadollahi A. (2018). Heart Rate Variability Responses of Individuals With and Without Saline-Induced Obstructive Sleep Apnea. pp 503-510 Journal of Clinical Sleep Medicine.

Gavrilovic B, Bradley TD, Vena D, Lyons OD, Gabriel JM, Popovic MR, Yadollahi A. (2015). Factors Predisposing to Worsening of Sleep Apnea in Response to Fluid Overload in Men. Journal of Sleep Medicine

Eytan D, Pang E, Doesburg S, Nenadovic V, Gavrilovic B, Laussen P, Guerguerian A. (2015). Bedside functional brain imaging in critically-ill children using high-density EEG source modelling and multi-modal sensory stimulation. NeuroImage: Clinical