Bojan **Gavrilovic**

Electrical Engineer · Embedded Expert

25 Viking Lane, Toronto, ON, Canada

(+1) 905-512-160 | gavrilovicbojan72@gmail.com | www.gavrilovic.ca | bojangavrilovic

Summary

Embedded systems engineer with 4+ years of experience in both hardware and firmware design. I have a successful track record of developing products from the ground up in a broad range of industries from health care to automotive. I am passionate about my work and strive to create new technologies using state-of-the-art engineering tools and concepts.

Work Experience

Autzu Inc.

Toronto ON, Canada

Hardware Engineer

Jun. 2019 - Present

- Leading the design of a vehicle telematics device used to collect data for predictive maintenance, as well as vehicle control (lock/unlock)
- Designing the following components for the telematics device
  - Power management system, GPS, LTE, Bluetooth, IMU, OBD and CAN communications
- Writing the following components for the embedded software on the telematics device (ARM, Embedded C)
  - Drivers for LTE Modem to communicate over MQTT
  - I2C communication to multiple sensors
  - UART communication to GPS, Bluetooth, LTE Modem, and OBD interpreter
  - CAN communication for vehicle control
- Mentoring junior engineers in proper hardware and software design methodologies

Toronto Rehabilitation Institute

Toronto ON, Canada

Research Engineer

Dec 2016 – June 2019

- Developed and prototyped wearable device to collect physiological signals during sleep (ARM, Embedded C)
- Developed, implemented and verified algorithms to monitor sleep and diagnose sleep apnea (Matlab)
- Developed and prototyped portable bioelectrical impedance system and integrated our design with smart textiles developed by Myant Inc.

Toronto Rehabilitation Institute

Toronto ON, Canada

Research Student

Sept 2014 – Aug 2016

- Designed and tested system to measure intra- and extra-cellular fluid in humans using bioelectrical impedance spectroscopy (Embedded C, Matlab)
- 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

Toronto ON, Canada

Software & Hardware Developer Intern

2016 - 2017

- Developed, prototyped and tested simulator for laparoscopic surgery (Java, Embedded C)
- 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

Toronto ON, Canada

Research Student

May 2015 – Sept 2015

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

Education

University of Toronto

Toronto, ON, Canada

MHSc, Clinical Engineering

Sept 2014 - Aug 2016

McMaster University

Hamilton, ON, Canada

BEng in Electrical Engineering

Sept 2010 - May 2014

- Graduated Summa Cum Laude

Publications

Journal

- **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