Dylan Walker Brown

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Professional Experience

- **University of California, Riverside** — Riverside, CA
  Research and Development Software Engineer — *March 2019 - Present*
  - **ARPA-E NEXTCAR**: Used Simulink Real-Time and J1939 to develop an automated powertrain controller for a plug-in hybrid electric bus. Co-author of SAE Technical Paper 2020-01-1057, "Dyno-in-the-Loop".
  - **Volvo Trucks Partnership**: Developed a Qt C++ UI front-end as well as a .NET C# back-end for fuel efficient driving strategy based on signal phase and timing look ahead information.

- **OSR Enterprises R&D Israel, Ltd.** — Petah Tikva, Israel
  Embedded Security Engineer — *March 2016 - December 2016*
  - **Automotive Cybersecurity**: Built an attack targeting an infotainment system, capable of transmitting spoofed lidar data over CAN bus. Conducted reverse engineering of 32-bit ARM assembly in IDA Pro.

- **Intel Corporation** — Haifa, Israel
  Internship, Augmented Reality — *February 2016*
  - **Unity Framework**: Developed a mobile app with Unity and ARToolKit for intuitive remote robot control.

- **Neomatix, Inc.** — Tel Aviv, Israel
  Internship, Computer Vision — *June 2015 - August 2015*
  - **Matlab**: Improved the accuracy of our tread groove identification pipeline. Achieved an improvement of +8% in true-positives and a 10x speed-up using a cubic kernel SVM and Matlab's parallel-for abstraction.

- **BMW-Brilliance Automotive** — Shenyang, China
  Internship, E/E Test Engineer — *September 2014 - February 2015*
  - **Test driving**: Conducted hardware-in-the-loop, closed track, and public road winter testing of ECU software.

- **ScanDigital (now Memory Ventures, Inc.)** — Torrance, CA
  Film and Video Technical Lead — *February 2013 - June 2014*
  - **Python and system administration**: As a fast-growing business–Inc. 500, 2013–my responsibilities expanded rapidly. Proposed, designed, and implemented a high-definition telecine for our 16mm film digitization product.

Education

- **Georgia Institute of Technology** — Atlanta, GA
  Master of Science in Computer Science – Computational Perception and Robotics — *January 2015 - December 2017*

- **Embry-Riddle Aeronautical University** — Daytona Beach, FL
  Bachelor of Science in Aerospace Engineering – Aeronautics — *August 2010 - December 2012*

Certifications and Skills

- **Sensor Fusion Nanodegree, Udacity, July 2019**: Stereo cameras, lidar, radar, and Kalman filters with C++.
- **Deep Learning Specialization, Coursera, March 2018**: Andrew Ng's machine learning courses with TensorFlow.
- **Israel Tech Challenge Fellows, February 2016**: 5-month cybersecurity and data science bootcamp.
- **California Licensed EIT**: Engineer-in-Training Certificate No. 164602. Passed FE Exam: Electrical and Computer.
- **FAA Private Pilot Certificate**: SEL Rating with 70+ hours including some aerobatic, glider, and helicopter time.
- **Natural languages studied (> 1-year, in descending order of ability)**: Hebrew, German, Chinese, Spanish

Programming Languages

- **Languages**: **Python, Swift, C++, C,** Matlab, Elixir/Erlang, Rust.
- **Technologies**: Linux, git, embedded targets, reverse engineering, SQL, CAN bus, and SAE J1939.