Robert Tacescu

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Qualifications Summary:

Computer science student with significant programming experience and a passion for technology.

Key Skills:

- **Software Development (Linux and Windows):** Algorithms, Data Structures, Machine Learning, Artificial Intelligence, Full Stack Web Development, ROS (Robotics Operating System), Gazebo (Physics Simulation), Git version control
- **Languages:** Python (4 years), JavaScript (6 years), Java (7 years), C++ (4 years), C (1 year), React (2 years), SQL (2 years)
- **Robotics:** Programming, Design, Build, Wiring
- **CAD (3D Modeling):** SolidWorks, Autodesk Inventor

Experience:

- **2020: GlobalFoundries Software Test Engineer 6 month Co-op/Internship**
  Designing and maintaining advanced testing software in C++ and Linux
- **2019: Project Odin:** www.rgtac.com/hackumass2019
  Odin is a hackathon project to assist those who are deaf or hearing impaired by using a combination of sensors and sound placement algorithms to project the information onto AR glasses. It detects and classifies the sound, notifying the user on the type and direction of the sound.
- **2019: Bear Image Classifier:** www.rgtac.com/ai
  Using MobileNetV2, transfer learning, and TensorFlow 2.0, this project classifies and distinguishes different types of bears using images automatically collected and augmented from the internet.
- **2016-2018: Safecopter Project:** www.rgtac.com/safecopter
  Safecopter is an internationally recognized collision avoidance system based on an array of time-of-flight 3D cameras. The raw point cloud data is converted into a probabilistic spatial format (octrees), and the optimal path is plotted using a combination of ROS, C++, and Python. It includes the design and build of a custom quadcopter capable of collision avoidance in both real world and physics simulated environments.
- **2016-2018: FIRST FRC Robotics** Programming Team Leader (Java and Python)
- **2014-2016: FIRST FRC Robotics** OpenCV vision target tracking software in Java
- **2014: FIRST FRC Robotics**: Time tracking software development (Java and MySQL)
- **2015-2016: FLL (FIRST Lego League) Mentor** at Granite Ridge Middle School

Education:

- **University of Massachusetts at Amherst**: Graduating in 2022 with B.S. in Computer Science
  - **GPA:** 3.5
- **2018**: Full-Stack Web Development Specialization (Bootstrap 4, React, React Native, NodeJS, MongoDB) on Coursera.
- **2017**: Machine Learning Course by Stanford University on Coursera
- **2016**: Fresno State Summer Programming Camp
- **2016**: Android Programming Course by Google
- **2013**: Java Programming Course: San José State University
- **SAT:** 1580/1600 **ACT**: 35/36

Work Experience:

- **UMass Libraries** - Student Assistant, Aug 2019 - Present (part time)
  - Image restoration with Adobe Photoshop and historical art research

Awards / Accomplishments: www.rgtac.com/awards

- **2019:**
  - Winner of best AR/VR hack, 3rd place overall at HackUMass 2019 for Project Odin
- **2018:**
  - First place award from NASA at Intel International Science and Engineering Fair (ISEF)
  - Second place award from American Institute of Aeronautics and Astronautics (AIAA) at ISEF
  - First Place (all categories) at the 2018 Central California Science, Mathematics & Engineering Fair
  - First Place in the category of Computer Science and Mathematics, Excellence in Science Award and four other special awards at the Central California Science, Mathematics & Engineering Fair
- **2017:**
  - Third Place in the category of Robotics and Intelligent Machines at Intel International Science and Engineering Fair (ISEF)
  - First place award from United States Air Force at ISEF
  - Second place award from NASA at ISEF
  - First Place (all categories) at the 2017 Central California Science Mathematics & Engineering Fair
  - First Place in the category of Computer Science and Mathematics, and three other special awards at the Central California Science, Mathematics & Engineering Fair
  - FIRST FRC Robotics Los Angeles Winner and Participation in 2017 FIRST FRC World Championship
- **2016:**
  - Third Place in the category of Robotics and Intelligent Machines at Intel International Science and Engineering Fair (ISEF)
  - First Place in the category of Computer Science and Mathematics, Second Place (all categories) at the 2016 Central California Science Mathematics & Engineering Fair
  - Second Place at California State University, Fresno Math Competition
  - FIRST FRC Robotics Orange County Winner and Participation in 2016 FIRST FRC World Championship
- **2015:**
  - FIRST FRC Robotics Ventura Regional Winner and Participation in 2015 FIRST FRC World Championship
- **2014:**
  - First Place at California State University, Fresno Math Competition

Hobbies: programming, tennis, skiing, archery

References: available upon request