UNIVERSIDADE FEDERAL DO RIO GRANDE DO NORTE
TECHNOLOGY CENTER
DEPARTMENT OF COMPUTER ENGINEERING AND AUTOMATION

DCA

UFRN

September, 1st, 2016, Natal, RN, Brazil.

To whom it may concern,

I met Jaime Dantas, as undergraduate student of the Computer Engineering Course, at our university (Federal University of Rio Grande do Norte – Natal – Brazil). Jaime worked as an undergraduate research student, between February and August, 2016, in the project SpaceVANT, under my mentorship. Project SpaceVANT consists in developing an Unmanned Aerial Vehicle (UAV) to scan possible rocket impact areas in the ocean in order to warn ships and boats to avoid any accidents.

Also, the UAV was developed to be used on life support operations. It carries a load with first aid kit, supplies, and equipment that can be dropped into remote areas. Jaime developed an embedded hardware architecture for recoverable and ejectable loads for UAVs using an Atmel ATmega328 microcontroller and a buck converter in order to guarantee high energy efficiency. A buck converter was developed to power the embedded electronics of the ejectable load. In Addition, Jaime worked with students of mechanical engineering to develop a mechanical system that drops the load of the UAV on a specify target. This system uses the embedded computer (BeagleBone) and several electronics components.

Finally, Jaime helped to develop a telecommunication interface using the ATmega328 microcontroller and embedded computer that receives a signal from a demodulator that operates in VHS.

During the project, Jaime developed an excellent hands-on habilities, as a member in a multidisciplinary team. He shown good leadership capacity and facility to cooperate and to work in teams. He is a very motivated and organized student, being always participative during the research activities. I strongly recommend Jaime Dantas to any research internship, due to his good technical knowledge and skills, and the possibility of improving even more its academic and personal experiences.

Pablo Javier Alsina
Coordenador do Curso de
Eng° Mecatrônica/CT
Matrícula 1242315

Professor Pablo Javier Alsina
D.Sc. in Electrical Engineering
Department of Computer Engineering and Automation
Universidade Federal do Rio Grande do Norte
Email: pablo@dca.ufrn.br