Bogazici University Electrical and Electronics Engineering Dep. / Research Assistant

I am currently working as a research assistant at Bogazici University but also developing software for my own thesis. I store all of my source codes in my GitHub (https://github.com/mdemirst) account. You can reach the recent project that I am working on from this link (https://github.com/mdemirst/SSG-CPP). In this projects, some files contain the core of my algorithm (segmentation based place detection)
Segmenttrack.cpp (https://github.com/mdemirst/SSG-CPP/blob/master/segmenttrack.cpp)
Graphmatch.cpp (https://github.com/mdemirst/SSG-CPP/blob/master/graphmatch.cpp)
Segmentation.cpp (https://github.com/mdemirst/SSG-CPP/blob/master/segmentation.cpp)
Placedetection.cpp (https://github.com/mdemirst/SSG-CPP/blob/master/placedetection.cpp)

Baykar Aerospace Comp. / Embedded Software Engineer

Before joining university as RA, I worked in UAV company and we developed the main software of autonomous flight system. Size of core software development team was about 15 people and total size of the company was about 80 people. I worked there for more than 1 year but we were not allowed to access/depart codes outside the company, therefore I can't share any code

My main responsibilities were writing embedded software for:

1. power management unit (full responsibility: design, writing software, testing, preparing GUI)
2. emergency case protocols
3. writing drivers for several ICs
4. Battery charging control algorithm (full responsibility)
5. LI-PO battery charger and monitoring software (full responsibility)
6. UAV diesel engine start, stop and emergency protocols (full responsiblity)
7. ECU communication with autopilot (full responsibilty)

Our team were being guided by our supervisor. All source codes were being inspected for the compatibility with company standards. Mostly, we were writing in C for embedded TI microchips. Occcassionaly, I wrote in C++ and Matlab for simulation purposes.

Sabanci University / Researcher

1. Worked on ROS navigation package (move_base) to integrate holonomic motion into package. (move_base was not supporting holonomic movement those times)
2. Worked on developing recognition algorithm of kitchen utensils.

I worked there individually most of the time. However, we were storing our source code in BitBucket SVN for storage.

Avea Telecommunication Comp

1. Developed an EKF based traffic estimation algorithm in Java. Algorithm generates a traffic report based on crowdsourced GPS data of the mobile phone users. I have also used Google APIs for this job.
2.
3. Designed and constructed single-board computer based gadget called SmartBox to show live feeds, tweets and notification on it's display. Instructtables link (http://www.instructables.com/id/SmartBox-powered-by-BeagleBone/)

Please don't hesitate to contact me if you have any further questions.

Best regards,
Mahmut