Introduction to Scientific Work

Homework Assignment 1

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Keywords
A selection of keywords from "Readings in Robots Architecture"

- Intelligent control, umanned ground vehicles (UIGV), real-time control architectures
- mobile robotics, robotics frameworks, SLAM, Localization and Mapping, mobile manipulation, Probabilistic robotics
- Machine Learning, Supervised / Unsupervised Machine Learning, classification
- Neurorobotics, Brain Based Robotics, Cognitive Robotics, neuromorphic robotics, intelligent machine, biologically inspired robotics

Important Sources
Important Conferences

- **ICRA:** Robotics and Automation
- **IROS:** Intelligent Robotics and Systems
- **ROBOCUP:** World Robotics Competition
- **NIPS:** Neural Information Processing Systems
- **IJCAI:** Artificial Intelligence
- **CVPR:** Vision & Pattern Recognition

Important Sources
Important Journals

- **AI Artificial Intelligence:**
- **PAMI - IEEE:** Pattern Analysis Machine Intelligence
- **IJCV:** Computer Vision
- **JACM:** Journal of the ACM
- **PIEEE:** Proceedings of the IEEE
- **CACM:** Communications of the ACM

Important Sources
Important Books

- **Artificial Intelligence: A Modern Approach** - (Russell, Norvig)
- **Probabilistic Robotics** - (Thrun, Burgard, Fox)
- **Introduction to Autonomous Mobile Robotics** - (Siegward, Nourbakhsh, Scaramuzza)
- **Neuromorphic and Brain-Based Robotics** - (Krichmar, Wagatsuma)
- **Intro to: Machine Learning** - (Alpaydin)
- **Springer Handbook of Robotics** - (Siciliano, Khatib)

Tutorials and Surveys
Useful Tutorials and Survey articles

- **Machine Learning** https://www.coursera.org/course/ml - Andrew Ng

Mind Mapping
An summary of Mind Mapping

- A way of graphically representing your mind.
- Adds the overhead in the graphical software interface
- If you have whiteboards, it's probably faster
- The advantage is issue and task tracking, but their are easier ways (Github Issues, other to do list software)
- Maybe they work for some people, but it's a personal preference.