**[김보섭](https://www.facebook.com/boseob.kim.16?hc_ref=ARQkNooRA7Ww01hBlTjQA_O1pnib2GS8AdBH6oRDz7NjK5LVOapZKzi9vOOm0REv7fk)**님이 그룹에 [링크](https://www.facebook.com/groups/modulabs/permalink/1478681038863741/)를 공유했습니다: [모두의연구소 커뮤니티](https://www.facebook.com/groups/modulabs/?hc_ref=ARQkNooRA7Ww01hBlTjQA_O1pnib2GS8AdBH6oRDz7NjK5LVOapZKzi9vOOm0REv7fk).

[10월 13일 오전 12:11](https://www.facebook.com/groups/modulabs/permalink/1478681038863741/) ·

기계학습을 공부한 산업공학과의 입장에서 공부할만한 한글로된 자료(강의자료 + 영상)을 모아봤습니다. 아래의 자료는 코드 실습이 필요한 내용일 경우는 언어는 전부 Python입니다. (통계학개론강의만 제외) 딥러닝에 관한 한글로된 영상 및 자료는 김성훈 교수님의 "모두의 딥러닝"이 있습니다. (정말 감사드립니다.) 영어로된 좋은 강의도 많지만 (cs231n, cs224d , RL course by David Silver, Neural Network course by Hugo Larochelle), 영어로 본격적으로 딥러닝을 공부하기전에 빠르게 익숙한 언어로 기계학습을 공부해보실 분들은 참고하셔도 좋을 것 같습니다.

cf. 웹프로그래밍은 사심으로 넣어봤습니다.

[k-mooc]  
미적분학1 (성균관대 채영도 교수님)  
- [http://www.kmooc.kr/…/course-v1:SKKUk+SKKU\_EXGB506.01…/about](https://l.facebook.com/l.php?u=http%3A%2F%2Fwww.kmooc.kr%2Fcourses%2Fcourse-v1%3ASKKUk%2BSKKU_EXGB506.01K%2B2017_SKKU22%2Fabout&h=ATNyKS5HaMz5aI5F_h0zEqcbym4j8pllvHoZ7q1sLfJQDBJlTS11bX1qCsDquDzUhW2EFMLlvuspNHLh02-WrCWygWtQS-rqrGXF7h6keI6XTFmP47nGpKuKUqdEUFOebQy-uJgMtyePrqXz5gKYL4iFVqtXKJfqWFNEFTcpz0xpz4ukXZgMJ9q1JrQuiTZEYnc2n8mt-c1WeZsIrAyXPtPD5G7iV87EpgovzapShms4k3Wc9NQJY1zjPLcmu5-WxND1aooiEjiCPJar9wmIlKsx7WPzMPQ0bBDiUO6uS9kZ3tw)

미적분학2 (성균관대 채영도 교수님)  
- [http://www.kmooc.kr/…/course-v1:SKKUk+SKKU\_2017\_05-01…/about](https://l.facebook.com/l.php?u=http%3A%2F%2Fwww.kmooc.kr%2Fcourses%2Fcourse-v1%3ASKKUk%2BSKKU_2017_05-01%2B2017_SKKU01%2Fabout&h=ATOOYW74s5zlJZqqgVSBWY867hXICxOYesH6437CnVqCHTOkVYJmZ64lGChmU_vxAtYcfajDEQGuVi9d9ZBVy3EH1caU6gH8FbBJAYRFAkHMgjYn4FIrl4j2gxzyEZEHM_PRTaZW-1mER7NqR4pdBVuxX9GzZm6AVJVdzgj-VXYrrsOps4tIDwoBwgkL0G0XZIki_38IATb5ZsfHRYCgjacW-elU-g51JBH8U9npTFfeFa6xlmqBCnHZZ2bn8ZymD9uUXhQcfhQm3RRwkxdLqqlzQKNKPcKhAMNFa3bw3-O8kCA)

선형대수학 (성균관대 이상구 교수님)  
- [http://www.kmooc.kr/…/course-v1:SKKUk+SKKU\_2017\_01+20…/about](https://l.facebook.com/l.php?u=http%3A%2F%2Fwww.kmooc.kr%2Fcourses%2Fcourse-v1%3ASKKUk%2BSKKU_2017_01%2B2017_SKKU01%2Fabout&h=ATP5XY8UBrq3Md1Xi3wocNz50fwsYV8z4qvYWARBux_uHQK4uISBWRzcdE2ZW-OUJ1bL8va8w_6uJTDVDmxbGCB2P8Z0oY60nydj_qu-XGfUhIph2z5_dvIMKu4f2S-nuMCcUICkXL6kCyJklDffBPu_n-v4XOuJwYh2ct_Tu3za2qU6jaFaE_b6Z4tiDisi4UEeGKdN82ydMm7EXO2Q7F6r1uGdPi4za_LFgXMCLOPyFKglf9iLjZVq_fzWBCV-fvRc_eO1KKWERgdDPXgVFYNRNHMKfK5WbIcL57NNh4HFcG4)

R을 활용한 통계학개론 (부산대 김충락 교수님)  
- [http://www.kmooc.kr/…/course-v1:PNUk+RS\_C01+2017\_KM\_0…/about](https://l.facebook.com/l.php?u=http%3A%2F%2Fwww.kmooc.kr%2Fcourses%2Fcourse-v1%3APNUk%2BRS_C01%2B2017_KM_009%2Fabout&h=ATMQH1PvGmfZUjFBAs9sLJLqWje6R1mYgNtmH5ysjWjWa13ZU0GxMy1UjgQp3LEM3BcX1uNybqYW2qbIQbx8Rs9v8bqg1-ppurU-tAzPwxVnRatH9BXV6X5Jg5odmVBCNAYfkkX1nYkezh4Wpt5Uz-JZWCAyaCLe8OfE2c-95Tly3uxmBKJrrdHkDda5-jHc4oYv3CiIBtn1wvH3ypD6KHxs9KXreCvdB_TbyR-Hknj72u3_iCdyNuFiNx9ecFqx05WwMBxfg9WwXus4svfbEO8MTQ632pg_Nzk4N6Sjp_zTSEG_ahgj1g)

인공지능과 기계학습 (카이스트 오혜연 교수님)  
- [http://www.kmooc.kr/…/course-v1:KAISTk+KCS470+2017\_K0…/about](https://l.facebook.com/l.php?u=http%3A%2F%2Fwww.kmooc.kr%2Fcourses%2Fcourse-v1%3AKAISTk%2BKCS470%2B2017_K0202%2Fabout&h=ATOBnIYVMP7mhe7lCdeFfy4CIWvbGEVSPi2IO-deoriz4lihrgyHPl1CBAVwVNHa6gPd6BeJA5H3peNS7VZ-sWAYpAvH7sfArdIBXetwjdXCy3XNFoc_93P8-xfJIpbSZ6R0l0ruVdDkdgdQRtIZY4Y2LRtMMFfW9JSiD1bJQiVDUF9x_02o9SSmi2f_4JatdfF7d0SgNlAqjZtZgDV4JJrR3uBXFvinWf5MC2TOvl-sIbWrLragJWIFnKQusEsHRVZDA0du0lrkpBK3s13uX_qSGfLwlAf_J0G7LWeSOsJhmJA)

[kooc]  
파이썬 자료구조 (카이스트 문일철 교수님)  
- [http://kooc.kaist.ac.kr/datastructure-2017f](https://l.facebook.com/l.php?u=http%3A%2F%2Fkooc.kaist.ac.kr%2Fdatastructure-2017f&h=ATM2RbRYf7ePcsKZuYnSr2qR6j8g3Lwz01DNORGKYrIu2k9vXb-VgSnLucV_F7tLfvBZlUUZWxq-JVEY-K-UogRzOZiYE0WcU7b3s2Zs30SIDPn7w5E--K9HxyRVNNr8YUNJVY44aDf-Pto72WZK7TD4PjhnZCPpHhCksBegR6kRexYbnCjhMGfizEe1bRTUxW3hefxj3CcawIarGc6ryOMFhXIm8A2S70xOjxnbhPRiwKVPdGQ-3sz1Vh2eUfZgW0dmwb00M3vN_KlYcyv9aZEImLIVqcwWYNDS3tGfjsqd63Q)

영상이해를 위한 최적화 (카이스트 김창익 교수님)  
- [http://kooc.kaist.ac.kr/optimization2017/lecture/10543](https://l.facebook.com/l.php?u=http%3A%2F%2Fkooc.kaist.ac.kr%2Foptimization2017%2Flecture%2F10543&h=ATNjtHfUlGgqaEPp_lqMstXMnkw3O7qMHfjYZ6P9tyjQhD3KMHbp9B56j7lB-cvN7r1RD_DYHD51QTtGw4mEDalJd-w2s9SKPwAO1eo2UkFvZmae4Wm8IKFHOvTitwtvbLrDVQOofmJtN6Qc7WFyKcLmqTrb1iu-0HVKzpLjlnzyj7F6G9cWgLZtA3qMN5c9o-j19jCiDOPOy1Gf4AtlQexGBzVPVglua7ZMADKz-V-oJhZAwIruVI2Q-KbtA8WrHmu0UTbngUP-ge8fc4RP9mBIXwHR-A4P13nY_DCX-CLRKmk)

인공지능 및 기계학습 개론 1 (카이스트 문일철 교수님)  
- [http://kooc.kaist.ac.kr/machinelearning1\_17/lecture/10574](https://l.facebook.com/l.php?u=http%3A%2F%2Fkooc.kaist.ac.kr%2Fmachinelearning1_17%2Flecture%2F10574&h=ATP-QYtXG2Bb58ghwTbA9SgDIfuNmO_SF-vILjUHAxv1BYbylF8wITT7-_ArsRQKj1wATYMmF-zVAP_OoQGUnpYrPREeBpuQ5Gqkb-60QaCO8Paah9hRsXy63Oi2cJzrs5yV45bEx7xm_97MUS8hhtMtjfy52CcLciqMcH5_kRPTxzNlCEGoGM1qGiUJvNBgJ_VfByL_oldVDsRdcRjDxF2Faj6ETpeElzFXR44VgqU7-Q9lIT24QFJo7wgovC7Di2pXjW3-4Vn9SgQ3HIH3kP1BLEVjCNLPwTi7AroGbYZBJeA)  
- [http://seslab.kaist.ac.kr/xe2/page\_GBex27](https://l.facebook.com/l.php?u=http%3A%2F%2Fseslab.kaist.ac.kr%2Fxe2%2Fpage_GBex27&h=ATPAmIuczrZFY9kMhUfhWgThxiKpqlNtIgSpMF7Ll2XTg4onHaV_TASY9FVS0JOVmQAWnJcGHburwbzCA2xwBd79O2fZKQLhfBCVCRonQoMBXCDTBj-vsWzc4ryBeVvCuoHB8LAqVEdsB9tGni_nJ7E0NbqMSgFT62O5o_NSnhuYYMTg1-KT71Ky7N4r8YSc_j7EsW8ji8wbJ7SPH1ohOdDhqVkN0RKvzmgj2U8jq6aAPfElwvKBYz6utU3mpU64YS3-UYp3vkpBYP1uh6R9plj3o6GhJREh4T3JLG5mWADAC8s)

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- [http://kooc.kaist.ac.kr/machinelearning2\_\_17/lecture/10573](https://l.facebook.com/l.php?u=http%3A%2F%2Fkooc.kaist.ac.kr%2Fmachinelearning2__17%2Flecture%2F10573&h=ATM0Ga6WAeSuKEjeub1eX1bOwakoG9A7f_EKtJ7Ht-V0aGZNikrinHv5Wtqplcb0j7db2_mjFyWtbJo8vKc2QFpYo0qPhzGtiyOkgWLqcX0cdjZmSPh1Y_Ezq-R8XWv7poNh7BS_FNWhklyddNom1U9WEgW9gRED_syWaLo0Ys09rW6Vjl9_v9HvxFpqaL75Xi_0MnxwPRQXhl5FKj8lDuSRZ4d_9GXA2clOfPhcL5C7xyEGB4uxewA8OVHwooI76MEhRIJXuDg3PWhY-tyLNU9cQA9F3ieQtLMUqkEBclB8uU4)  
- [http://seslab.kaist.ac.kr/xe2/page\_Dogc43](https://l.facebook.com/l.php?u=http%3A%2F%2Fseslab.kaist.ac.kr%2Fxe2%2Fpage_Dogc43&h=ATOv6QtGCxVIUJO0OZti_Xefn0wDC9zbbb1Fk3K-A8i30zYiw48fNvm4fmpJefY1437L4ob-qhsYAfL4EtUp2d1B7RHbTVztaflk7jjR2FgcO4HV7LGDtGIB9_C00n9qzeRrHydUPvLs18TcObDIVY9xo2yJOlJPZ4GhmwFPUloGsnvZ2vi3porRgu8uf_IpjAYaryE97GnI-qo1LBBhljvZUNeNg4P_J7u-TZyVhW-A0nsknmlNopSjsmkjj38vEjwCigSfAuKNOpDP4d-Khbg7QKfKXjin_pqdcJTKfTiMat4)

인공지능 및 기계학습 심화 (카이스트 문일철 교수님)  
- [http://kooc.kaist.ac.kr/machinelearning3](https://l.facebook.com/l.php?u=http%3A%2F%2Fkooc.kaist.ac.kr%2Fmachinelearning3&h=ATPzfwzAzqNFHgOOI4X50Zeg2VrVorrq20hiDG0kxG6bTB-pawt8qhjOtAGC2Pg8VqSi47il8P7Tu0HUUF3Cf7sT1FNB8D03dpg0GyX4s-usMdJd9AyuVUB4eTRMdELc3gI061FHszWYPE9i5bJi-N8nW1JiLQWZ0OKEr_SbhLz8m-EGipncnDoBy-Y0PMIq8KmLe6YP0seM0Xvpi0ho9VK1Bb68ejekLQMyiae4ryxBnEeIUCjR8ZLqwG_j1blXH0g-GCB66QHRWCLab1pwt8gbcNb4AJS4XuOfMyI0pkG0xig)  
- [http://seslab.kaist.ac.kr/xe2/page\_lMmY25](https://l.facebook.com/l.php?u=http%3A%2F%2Fseslab.kaist.ac.kr%2Fxe2%2Fpage_lMmY25&h=ATNa1OSRBlvESSJz5p1scKQCEJxw0tGeV_SE3-nznRWwUT5RSAVj4UwRUL3h5sBiZECAVEEEHgnutc8-EB-EQYlP1np6aPW2lzc5-XAWuk0XzSgY5N6F01yRyllWsaTz4K-j9aphmM-w_9hbNCSDVx9pC8KNd6WiT1R8DuwvoYvqyFw4zNpKkLly-iSk3wdNBjmG8NIrmJ96g9aOWxV5TybsXav0yrDI5vcT7CJo61zRFrsLWP-Ii3SgQGGEFdAFXL0jONrbIDkz92Tv9hWiWnEwz1GPBvK3x5kImnow0tq9PHI)

[TeamLab]  
데이터과학을 위한 파이썬 입문 (가천대 최성철 교수님)  
- [https://github.com/TeamLab/Gachon\_CS50\_Python\_KMOOC](https://l.facebook.com/l.php?u=https%3A%2F%2Fgithub.com%2FTeamLab%2FGachon_CS50_Python_KMOOC&h=ATPOzvNtNLRkNNVvxqe5CA7QQRkXhDG0dg0gG-_1EX4czsFKXv8wu_azc7RtAvewcApFzSmSRoLENVOeEdluv02HN1OR4MYLm0Y3aaoa3V0I-wTVIDzFcyK81s61XOo28lz7mfx8fmdPQljnjsPUijS9KdcMRPpBwDUGqtMuck0r0OJRXVKuGKhS5XXhp0HoIGW5ECY7cvtbYIER8taIKnaptCaA49T9j31yYp02uqmSW_DkWp9w44Zctz0z04bGWWDdqckV1MrvOTO4quUQ4xYb87_nbAHiQNExQliOf9YcG2U)

밑바닥부터 기계학습 (가천대 최성철 교수님)  
- [https://github.com/…/machine\_learning\_from\_scratch\_with\_pyt…](https://l.facebook.com/l.php?u=https%3A%2F%2Fgithub.com%2FTeamLab%2Fmachine_learning_from_scratch_with_python&h=ATMxTm7_0G2GVkYIFpI6m7x0_7E3NL3SUV7_x9S1-9r_fzXDP3mVzlRxLVrQeag9cGaMxVOqop-c2T2VwPbYGm6MFC6cS8_d_iMKztoFufGwQLRIkT_TiLtpvt8anMzeBMb2I04T8i0pcNTdI1ZK6fAga091tQAB5Ssf3mc14MOd6km_aU48x9dIWhUguHJo7Gon3w-64RMueealOFYRoCv1vyrVIx61arpPv6bEwawrPGLdfo7DLol4X14QcN3Lp128OTDtyZuc5XsvOnQokvL7jk069a5H3LHylviHJCWs0bI)

경영과학(가천대 최성철 교수님)  
- [https://github.com/TeamLab/Gachon\_CS50\_OR\_KMOOC](https://l.facebook.com/l.php?u=https%3A%2F%2Fgithub.com%2FTeamLab%2FGachon_CS50_OR_KMOOC&h=ATPS99ZXPqyj1Od99bctxXGr9IjEXLtHmZVoCf3UV5MNFltBlotlyDXLNkf5qOxwRXngRij7xi2vZetkyGZb_JuMTBvryxcsbDooZLxWO8wJfRK8I1YxmG2oX3pCF_pBVZmG7si8gzmvguWghPpbmSFS95GJYEBUHt0n4Eo7GqSus5E3tOxWG4mVqB8QdWnIaeRdQ_GMwYxcD8UPueVGrDh98Uv75XyJnJjTZlGk6no-9Hpjl67816fetZCec0b0bDz94nIXHthsoLpjVuU97762LVnAwY3IW_LYt-0k2juA5Hw)

웹프로그래밍 (가천대 최성철 교수님)  
- <https://github.com/TeamLab/cs50_web_programming>