

CSE 455 Winter 2025: Schedule

Week	Date	Class topic	Materials	Assignments	Lecturer
1	Tue, Jan 7	Lecture 1: Brief history of Computer Vision	[slides] (../ slides/01_brief_history_of_computer_vision.pdf) [recording] (https://washington.zoom.us/rec/play/qiV0GeSvHpapquxJBpsenOunJ-GP9MbX7l7B6Tm2riuUmxtcnXQ9gw6cgq3dDilomgs-eFYsT3zZ9H4E.INg795NibMK_emdc)		Ranjay
	Thu, Jan 9	Lecture 2: Pixels and Filters	[slides] (../slides/02_pixels_and_filters.pdf) [recording] (https://washington.zoom.us/rec/play/DHSsb6GQsNuZG-GICU-c5p29wgrXiAg-69fVM4dF2mhx72cx7oz5T8GskUEBlwsCPuf6OghjGW9w6l9u.l9LtRPyqPxNe-IWa)		Ranjay
	Fri, Jan 10	Recitation: Linear Algebra Basics	[slides] (../recitations/01_linalg_review.pdf) [recording] (https://washington.zoom.us/rec/play/Pmsa6dNyFptM-Tpj6nhkBWlgbRPPplDV3d4DQy8V1_vyxUedQlIZu1On1_b9a8KOL5zR4pvy7JjX8Oo5._eOb2mdhmt2YTHOU)		Ayush
2	Tue, Jan 14	Lecture 3: Systems and Convolutions	[slides] (../slides/03_systems_and_convolution.pdf) [recording] (https://washington.zoom.us/rec/play/uVkeQK6llsLvwlrl2NMz8AZxKbMI4WO1EeDwtOfLfax7mKwLM4eUzx3KnxlWy_Br5t-sZXrBUq4rlSSH.fOPdKxVfVAXh_XvF)	Assignment 0 due (not graded)	Jieyu
	Thu, Jan 16	Lecture 4: Derivatives and Edges	[slides] (../slides/04_derivatives_and_edges.pdf) [recording] (https://washington.zoom.us/rec/play/WUT_tjl6OaeyS3xWl8Q-Js_NN_np1OofirfwjxwdMQXmI87jQYwljN3Xxb9X3ZwmwCMGm6hX8YVE8AHN.YT2PLaM1YoyOygEv)		Ranjay
	Fri, Jan 17	Recitation: Python and Numpy Basics	[Notebook] (../slides/Numpy_Tutorial.ipynb) [recording] (https://washington.zoom.us/rec/play/_Blw_PNN63fMQXKwWG8Zzl5p0BjkwKB4024PxANBMfyzN-1vnis3jlHA-8Mfl61Nel9JgrvGuXhOPw2G.BmAzlzX3EaBV9TSw)		Ayush
3	Tue, Jan 21	Lecture 5: Detecting Lines	[slides] (../slides/05_detecting_lines.pdf) [recording] (https://washington.zoom.us/rec/)		Ranjay

play/KWGdgCTt2Z8C_nyP0SbtMvJQY5Zyoy9s-
 PtgVHlj3iVmOTLiYbYKcA-
 YjFGjyF5F48vNjIInoeJ_uKOK.XQatfeAiXITX69Z1)

Thu, Jan 23

Lecture 6:

Lines and Corners

[slides] (../slides/06_lines_and_corners.pdf) [recording] (https://washington.zoom.us/rec/play/abuMW_h7slb-wB2D1YFPMB9mNVCT3wwk0dDtDmRmf7JfZvHHDa7Hth4F7lcTxm_ujLV57MtFSgWTrSiB.S3oT5WVmxS_aawKS)
 Ranjay

Fri, Jan 24 **Recitation:** [slides] (../recitations/03_linalg.pdf) [recording] (https:// Assignment Joshua
 Linear washington.zoom.us/rec/play/ 1 due
 algebra zievxUocdxODAn0YilbXfCC9z4rBtUnwhALdcHvA1Be66luq- today at
 part 2 mY8JpTbjK023v9bccsMiaQgv9LMEhW.LoBz2xH6fqN6X0gd) 11:59 pm

4 Tue, Jan 28 **Lecture 7:** [slides] (../slides/07_detectors_and_descriptors.pdf) Ranjay
 Detectors and [recording] (https://washington.zoom.us/rec/share/
 Descriptors FU3voSjgy2RNyEFBABIaR9If66NZUY6l39XOxC1_kdqxxz-
 BBhEhRsW28G0d506q.G9CTHxh3ZmYaE9fA)

Thu, Jan 30 **Lecture 8:** [slides] (../slides/08_descriptors_and_homography.pdf) Ranjay
 Descriptors and [recording] (https://washington.zoom.us/rec/share/
 Homographies XS9o9-W8WwR7ONz_Rctp9zGrkvlZsSmvlsZ-
 HnlnOQqrd30w6dHT8SFx7L6l8GG.h89F2j30Tm71csQU)

Fri, Jan 31 **Recitation:** [slides] (../recitations/05_panorama.pdf) [recording] (https:// Simran
 Panorama washington.zoom.us/rec/play/
 y_wV3N5VBFzPtFXnXSpZIWvVpQNB5m0WllejXlPJw6zzuBg62FWfBA-
 oXhcdz2s658Dtvx7clAZcoP0.eakZEoLnebkqfpOA)

5 Tue, Feb 4 **Lecture 9:**
 Saliency and Retargeting

[slides] (../slides/09_saliency_and_retargeting.pdf) [recording] (https://washington.zoom.us/ Ranjay
 rec/play/
 bwdGbjASVOp23LV2qgawWoVLuAdYojBGKZQoz0Q9Pmgvl_sjToJJUS3boQGGyPmESwwwVs4D-
 qSsx2md.aoXFZ0pj-JDM1z3c)

Thu, Feb 6 **Lecture 10:** [slides] (../ Jieyu
 Segmentation slides/10_segmentation_and_clustering.pdf)
 [recording] (https://washington.zoom.us/rec/
 play/38WoZ_7og-
 kMa4sHLCpSf0NlYj9HItlICHjxPSjuzB84so9e6TfRDS-
 ZVbld7i0MsPzH5WvcalLedGCs.6Rtv7qh5Rx_1Yceu)

Fri, Feb 7

Recitation:

Geometric transformations

[slides] (../recitations/04_geometric_transformations.pdf) [recording] (https://washington.zoom.us/rec/ Assignment 2 due
 play/9wLUqivtc5V9lvTUnwVVSklFipqHeoyYMZyplox84qU5oNmriD6aVimUhCLzAtdXMIAlwhG3HdCdajb.UIHlUhvZDIPTBpXk)
 Joshua

today at 11:59 pm

6 Tue, Feb 11

Lecture 11:

K-means and Mean Shift

[slides] (../slides/11_kmeans_and_mean_shift.pdf) [recording] (https://washington.zoom.us/rec/play/FPXg_f5K2sAwK0QPCQd81N6CAr2cwvijmWFh5PYrImXbHHRHBvL8tO7nf8S_Wxbd_hbK5QmfhmpWUdMym.szO9-Jj5cnvOVB7-)

Ranjay

Thu, Feb 13

Lecture 12:

Geometry and
Cameras

[slides] (../slides/12_geometry_and_cameras.pdf)
[recording] (https://washington.zoom.us/rec/play/A8JWRttndnPnfTSDeBhkFtkRG9RtKm52b-ZodEx7OZ1Wfqr-lZZSpWqc2KWWrDsFUyFRw9ug-ElzrZ2nJ.-RpLxEFOG38neNWE)

Ranjay

Fri, Feb 14

Recitation:

Calibrations and Multiple Cameras

[slides] (../recitations/06_multiview_geometry.pdf) [recording] (https://washington.zoom.us/rec/play/ppYYu9AH9Mrl178IQc-8nxLrokMc5alQDhJsIDQ9yxEFaNj0jQgjWkOqkuaFqi8d_Z0rkc5KShZektQ.16Q8M5GKMcN6iUbT)

Raymond

7 Tue, Feb 18

Lecture 13: Camera Calibration

[slides] (../slides/13_calibration.pdf) [recording] (https://washington.zoom.us/rec/play/CE2kamVvKNGVw3pY3MJgM-vOkwEHPCTxfHkJ_WS2EyJb54YHv0Tl9F8euLDTuwksWdFbk8D88fJd-CX.cbzt72RScQl1UVM9)

Ranjay

Thu, Feb 20

Lecture 14:

Recognition and
kNN

[slides] (../slides/14_recognition_and_kNN.pdf)
[recording] (https://washington.zoom.us/rec/play/HtY9HkhvA5Z7awHbJizdpKuBoQ_v-0o4-eCM4zpUjLP7lXJzdWTz_STE9bvY387qD_TgOPb6aX-aVup.dUMKvM0v9zDqtkNR)

Ranjay

Fri, Feb 21

Recitation: Ontologies

[slides] (../recitations/07_Large_Scale_Recognition.pdf)
[recording] (https://washington.zoom.us/rec/play/WhL1FMjZs9WTDVp6VN5uFm-b1Ajj1g4K31RxpVE9Uq3ZmpZalk8CXaMk4IQZf3pl0e-H7LmsW-Alr4Oi.7GRR3N8iCX0dk8oX)

Assignment Rustin
3 due
today at
11:59 pm

8 Tue, Feb 25

Lecture 15:

Dimensionality and Reduction

[slides] (../slides/15_dimensionality_reduction.pdf) [recording] (https://washington.zoom.us/rec/play/dH_4BI7E8gN87x6vCZ7yqNcqBvuv2RkKdKdGUBgyPe9q2Kkkk2lGX0IC8ikdvWhnmk6wBGh_B18QRQUjc.6wIP3LdaGAKzJlPn)

Ranjay

Thu, Feb 27

Lecture 16:

[slides] (../slides/16_detection.pdf) [recording] (https://washington.zoom.us/rec/play/RZ4Nhyghb7XOTSZTgtEh5knyZixshOocq8hB-3wd05WMxfVkiX3tMysLsR5P9JG17h1HcSl1zHKvOKm_.fMvfDaoxDY4pxvh4)

Ranjay

[slides] (../recitations/08_ontologies_part2.pdf) [recording] (https://washington.zoom.us/rec/play/0D4dUkvSVGy7PvrdWCvbBP1xZ5JdfEbsOm4MKSzXdYqU7W350hCOu3_Pm8ALzYgOaSEyzcchnR10agtO.4Phahlf_-5TxweC1)

Nishat

Th, Mar 6	Lecture 18: Learning non-linear systems of filters	[slides] (../slides/18_linear_classifiers_and_backpropagation.pdf) [recording] (https://washington.zoom.us/rec/play/Vr21kY4sVxH8niAmCE9ReR4ADjNE4JW6UDLlmLDpzTcxxDnT1rcE6npTIQ7uoO-MJmTMO6h9Qif9YiNP.1p8FbsECZ8Agt24o)
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Fri, Mar 7	Recitation: Exam Prep	[See practice exam] () [recording] (https://washington.zoom.us/j/91234567890)	Assignment 4 due today at 11:59 pm
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10	Tue, Mar 11	Lecture 19: Structure from motion	[slides] (../slides/19_structure_from_motion.pdf) [recording] (https://washington.zoom.us/rec/play/HJjDsjVXY3yv9vzyTXJetdQCTQEcf3Z-ET0qoco_cW4CvVV3wy0wrV--nGuGZ04Ax-wB2U7-iP99OzSD.reAO0B__j_8JXDby)	Ranjay
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Ranjay

Fri, Mar 14

Assignment 5
due
today at 11:59
pm

Mon, Mar 17
10:30-12:20

Final Exam

CSE2 G20

Celebrate!



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