\* Introduction to AI

\* Agents and Environments

\* Informed Search (Heuristics and A\*)

\* Genetic Algorithm

\* Local Search

\* Games (Minimax and Alpha beta)

\* Gradient Descent

This has already been mentioned in the class. Pay attention.

This is the syllabus for the midterm:

* Introduction, Agents, Environments, etc
* Heuristics: Admissibility, consistency, dominance,
* State Space, A\* search, Best first search, Iterative deepening A\*
* 2-player games, minimax, alpha-beta pruning
* local search: hill climbing, simulated annealing, gradient descent
* Genetic Algorithm: n-queen problem, 0-1 knapsack problem

**Syllabus for final**

**Local search (excluding GA)**

**Local Search 1:** [**https://drive.google.com/file/d/1IYQrFipwd2HMuGFUi-LfF3vI547sQDZT/view?usp=sharing**](https://drive.google.com/file/d/1IYQrFipwd2HMuGFUi-LfF3vI547sQDZT/view?usp=sharing)

**Discussion on Local and informed Search:** [**https://drive.google.com/file/d/17x3Lo-f5E6D1cao36VyJnF8xGdBJXv24/view?usp=sharing**](https://drive.google.com/file/d/17x3Lo-f5E6D1cao36VyJnF8xGdBJXv24/view?usp=sharing)

**Regression analysis**

**CSP**

**Constraint Satisfaction Problem 1:** [**https://drive.google.com/file/d/1j5iIIIWOneSvXBl1tbwtz4WUcfeJojcb/view?usp=sharing**](https://drive.google.com/file/d/1j5iIIIWOneSvXBl1tbwtz4WUcfeJojcb/view?usp=sharing)

**Constraint Satisfaction Problem 2:** [**https://drive.google.com/file/d/1RPSTJaziwIrzMXH2RFcpU5v3D4ra0HXE/view?usp=sharing**](https://drive.google.com/file/d/1RPSTJaziwIrzMXH2RFcpU5v3D4ra0HXE/view?usp=sharing)

**Probability theory**

**Probability theory 1:** [**https://drive.google.com/file/d/1yj2KzNC5B6-wEnX\_XZ4Ek6pmRawE29oX/view?usp=sharing**](https://drive.google.com/file/d/1yj2KzNC5B6-wEnX_XZ4Ek6pmRawE29oX/view?usp=sharing)

**Probability theory 2:** [**https://drive.google.com/file/d/1R-NqBSTZZvLfPwdCesTUd\_KdMJCeaqOu/view?usp=sharing**](https://drive.google.com/file/d/1R-NqBSTZZvLfPwdCesTUd_KdMJCeaqOu/view?usp=sharing)

**Naive Bayes**

**Naive Bayes:** [**https://drive.google.com/file/d/1CRFJYkEj93GzOce4IR\_YvI7j8B5T\_79N/view?usp=sharing**](https://drive.google.com/file/d/1CRFJYkEj93GzOce4IR_YvI7j8B5T_79N/view?usp=sharing)

**Decision Tree**

**CSE422 Live Session Recordings Fall2021**

**Introduction:** [**https://drive.google.com/file/d/1wh9PHRZfDoIca4FIpcF7ij6iBLJRFDDw/view?usp=sharing**](https://drive.google.com/file/d/1wh9PHRZfDoIca4FIpcF7ij6iBLJRFDDw/view?usp=sharing)

**Agents:** [**https://drive.google.com/file/d/1k0QWcn7EmpBL5mQTdKh69eO\_9SLvsndi/view?usp=sharing**](https://drive.google.com/file/d/1k0QWcn7EmpBL5mQTdKh69eO_9SLvsndi/view?usp=sharing)

**Types of environment:** [**https://drive.google.com/file/d/121vLyepBg\_5vkkF2f1w6FWOrdTmT3oRG/view?usp=sharing**](https://drive.google.com/file/d/121vLyepBg_5vkkF2f1w6FWOrdTmT3oRG/view?usp=sharing)

**Uninformed Search 1:** [**https://drive.google.com/file/d/1aHYvpLW4zscGCvQOQCZpFvMeCgh9UoF3/view?usp=sharing**](https://drive.google.com/file/d/1aHYvpLW4zscGCvQOQCZpFvMeCgh9UoF3/view?usp=sharing)

**Uninformed Search 2:**[**https://drive.google.com/file/d/1VPer\_Z5Ntd2c1S-\_aKVOyccozT4Vs0Oy/view?usp=sharing**](https://drive.google.com/file/d/1VPer_Z5Ntd2c1S-_aKVOyccozT4Vs0Oy/view?usp=sharing)

**Informed Search 1:** [**https://drive.google.com/file/d/1ZSQS3FAVoLt5Muxw2dNyt3X9FnMd1WTD/view?usp=sharing**](https://drive.google.com/file/d/1ZSQS3FAVoLt5Muxw2dNyt3X9FnMd1WTD/view?usp=sharing)

**Informed Search 2:** [**https://drive.google.com/file/d/1zRBYJB3mDF7SzchN2C4nJu\_5RTbl9EgR/view?usp=sharing**](https://drive.google.com/file/d/1zRBYJB3mDF7SzchN2C4nJu_5RTbl9EgR/view?usp=sharing)

**Local Search 2 and Genetic Algorithm 1:** [**https://drive.google.com/file/d/1k6F2z72X4OXnxCYsCr3qYovgu7OoWkYB/view?usp=sharing**](https://drive.google.com/file/d/1k6F2z72X4OXnxCYsCr3qYovgu7OoWkYB/view?usp=sharing)

**Games:** [**https://drive.google.com/file/d/15FawYZuqDw0\_kURAdiMrJgBmsqEJdg13/view?usp=sharing**](https://drive.google.com/file/d/15FawYZuqDw0_kURAdiMrJgBmsqEJdg13/view?usp=sharing)