Machine Learning in SE

1. AI techniques vs. SE task
   1. Vast amount of AI techniques
   2. In the context of Se only some can be applied in scope
   3. Think in terms of shifting the burden of evolution from the programmers to be systems themselves
   4. To build systems that can take some responsibility for their own evolution
2. Algorithm Approximation
   1. Knowledge of the problem domain
   2. Can be approximated
   3. SE contains many problems with poorly define domains
   4. 2 biggest being predication and discovery
3. Predication
   1. Quality, cost, size
   2. How good
   3. Difficulties
4. Software quality predication
   1. Genetic algorithm and colony optimization algorithms
   2. Augment these various techniques
5. Software cost predication
   1. Cost model with neuro-fuzzy technique
   2. Cost-sensitive neural networks
6. Identifying objects
7. Source code vocabulary normalization
8. Handling big data
9. Data structures