

Paper Presentations

Most research papers follow a straightforward structure (e.g., introduction, methodology, evaluation, and results). Occasionally, however, we may select papers that do not follow this format strictly, such as Paper 1 below. In these cases, we may provide a suggested allocation to help presenters divide the paper fairly and organize their presentation. Please note that these allocations are only suggestions. You may divide responsibilities as you see fit, as long as the work is distributed fairly among all presenters.

For this session, please plan to allocate approximately 50 minutes to Paper 1 and 30 minutes to Paper 2. These times exclude questions, answers, and class discussion. If you feel that an adjustment is needed based on your presentation plan, you may contact the course staff so they can plan accordingly.

Paper 1: Harness Engineering: Anatomy, Architecture, and Evolution of Coding Agents

This survey paper provides a broad overview of the current state of AI coding agents.

Four (4) students will present Paper 1.

The suggested allocation below balances section length and difficulty.

- **Student 1**
 - **Foundations and Agent Actions**
 - * §§1–5: Introduction, definitions, related work, methodology, and overview
 - * §6: *Agent Loop*
 - * §8: *Tools & Actions*
 - **Student 2**
 - **Prompts, Caching, and Context Management**
 - * §7: *LLM Integration*
 - * §9: *Memory & Context*
 - * §13.2: *Twin Absences*
 - **Student 3**
 - **Control, Multi-Agent Systems, and Extensibility**
 - * §10: *Safety & Permissions*
 - * §11: *Multi-Agent Orchestration*
 - * §12: *Extensibility*
 - * §13.1: *Pattern Catalog*; §13.3: *Protocols*
 - **Student 4**
 - **Trade-offs, Discussion, and Recommendations**
 - * §13.4: *Trade-offs*
 - * §14: *Platform Turn*
 - * §15: *Discussion*
 - * §16: *Recommendations + MVH Code*
 - * §17: *Conclusion*
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Paper 2: How Coding Agents Fail Their Users: A Large-Scale Analysis of Developer-Agent Misalignment in 20,574 Real-World Sessions

Two (2) students will present Paper 2. The suggested allocation is:

- **Student 1**
 - Introduce the concept of the paper
 - Present the methods and evaluations
- **Student 2**
 - Present the related work
 - Critique ¹ the paper

¹A critique should assess the paper’s main strengths and limitations. You should discuss whether its methods and evaluation support the claims made. You can also identify important gaps and suggest improvements and directions for future work.