

| Algorithm | Input | Learning Task | Objective | PP Tech | Venue | Link |
|--------------------------|--|----------------------|-------------------|-------------------|---------------|---|
| CVGAE ^[1] | Implicit feedback | Click prediction | Perf + Priv + Eff | Camouflage | TKDE'25 | https://github.com/YudiXiong/CVGAE |
| FedHCDR ^[2] | Implicit feedback | Click prediction | Perf + Priv | Decoupling | ECML PKDD'24 | https://github.com/orion-orion/FedHCDR |
| PPGenCDR ^[3] | Implicit feedback | Click prediction | Perf + Priv | GAN + RDP | AAAI'23 | https://github.com/XeniaLLL/PPGenCDR |
| PriCDR ^[4] | Implicit feedback | Click prediction | Perf + Priv | JLT + SJLT + DP | WWW'22 | https://github.com/TiliaceaeSU/PriCDR |
| PFCDR ^[5] | Explicit feedback | Rating prediction | Perf + Priv | Prototype mapping | WWW'25 | https://github.com/walcheng/PFCDR |
| VerFedGNN ^[6] | Explicit feedback | Rating prediction | Perf + Priv | TQ + DP | ICML'23 | https://github.com/maiph123/VerticalGNN |
| FedMF ^[7] | Explicit feedback | Rating prediction | Priv | HE | IS'20 | https://github.com/Di-Chai/FedMF |
| FedCSR ^[8] | Single-type sequential feedback | Next-item prediction | Perf + Priv + Eff | - | COLING'25 | https://github.com/zdy769243418/FedCSR |
| FedOCD ^[9] | Single-type sequential feedback | Next-item prediction | Perf + Priv + Eff | LDP | APWeb-WAIM'24 | https://github.com/AA-Ashley/FedOCD |
| FedDCSR ^[10] | Single-type sequential feedback | Next-item prediction | Perf + Priv | Disentanglement | SDM'24 | https://github.com/orion-orion/FedDCSR |
| PriCDSR ^[11] | Single-type sequential feedback | Next-item prediction | Perf + Priv | SDP | ICDM'23 | https://github.com/LachlanLin/PriCDSR |
| FUPM ^[12] | Implicit feedback + Review text | Click prediction | Perf + Priv | LDP | TMM'25 | https://github.com/Lili1013/FUPM |
| PF-GNN+ ^[13] | Implicit feedback + Item information | Click prediction | Perf + Priv | - | UAI'23 | https://github.com/zfan20/PFGNNPlus |
| SeSoRec ^[14] | Explicit feedback + Social relations | Rating prediction | Perf + Priv + Eff | Secret sharing | ECAI'20 | https://github.com/encryptogroup/ABY |
| FFMSR ^[15] | Sequential feedback + Item information | Next-item prediction | Perf + Priv | - | TOIS'25 | https://github.com/Sapphire-star/FFMSR |
| PFCR ^[16] | Sequential feedback + Item information | Next-item prediction | Perf + Priv | CE | WWW'24 | https://github.com/Sapphire-star/PFCR |

^[1][Xiong et al., 2025]; ^[2][Zhang et al., 2024b]; ^[3][Liao et al., 2023]; ^[4][Chen et al., 2022]; ^[5][Wang et al., 2025a]; ^[6][Mai and Pang, 2023]; ^[7][Chai et al., 2020]; ^[8][Zheng et al., 2025];

^[9][Liu et al., 2024]; ^[10][Zhang et al., 2024a]; ^[11][Lin et al., 2023]; ^[12][Wang et al., 2025b]; ^[13][Fan et al., 2023]; ^[14][Chen et al., 2020]; ^[15][Lu et al., 2025]; ^[16][Guo et al., 2024];

Note: PP Tech = Privacy-Preserving Technique; Perf = Performance; Priv = Privacy; Eff = Efficiency; GAN = Generative Adversarial Network; RDP = Rényi Differential Privacy;

JLT = Johnson-Lindenstrauss Transform; SJLT = Sparse-aware Johnson-Lindenstrauss Transform; DP = Differential Privacy; TQ = Ternary Quantization; HE = Homomorphic Encryption;

LDP = Local Differential Privacy; SDP = Sequential Differential Privacy; CE = Composite Encryption (Quantization + Randomized Response).

Table 1: Summary of representative open-source algorithms in federated cross-domain recommendation.

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